Bank Loan Undrawn Spreads and the Predictability of Stock Returns *

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December 31st, 2017

Abstract

We document a new empirical finding that, in the cross-section, the information contained in bank loans' forward-looking uncertainty measure can predict firms' returns across a range of time horizons. This effect is separate from previously documented asset pricing puzzles related to idiosyncratic volatility, analyst forecast dispersion, and credit risk. We believe return predictability arises because banks have private information regarding firms' future prospects including operating performance and cash flow uncertainty, and we indeed find the predictability of proxies of these two variables. A long-short strategy based on this finding can generate a significant alpha of over 7% per annum.

JEL Classifications: G12, G20.
Keywords: Return Predictability, Asset Pricing, Bank Loan.

*We are grateful to Doron Avramov, Geert Bekaert, John Cochrane, Terrance Odean, and Neng Wang for helpful suggestions. All errors are our own. We thank Columbia University for research support.

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1. Introduction

Do bank loan spreads contain private information regarding banks' assessment of firms' subsequent performances? We answer this questions by examing the information contained in a bank loan's All-in-Undrawn spread.

The fact that bank loan transactions could involve private information that would be useful for trading is known in the literature. Specifically, by looking at 416 loan amendments, Ivashina and Sun (2011) have documented that an institutional insider who participate in bank loan renegotiations can trade on the same firms and gain 5.4% in annualized returns. In this paper, we do not focus on bank loan renegotiations or amendments but on new bank loans (facilities), specifically new lines of credit, by examing a sample of 23705 lines of credit contracts from January 1992 to December 2016.[1]

Roberts and Sufi (2009) have found that 82% of U.S. firm-years observations have a line of credit. We focus on credit lines because one prominent feature of this type of contract is the draw down option (Berg et al., 2016). The credit line is priced through both an 'All-in-Undrawn spread' and an 'All-in-Drawn spread'. The All-in-Undrawn (AIU) spread is the annual cost that the firm is charged by the bank on the portion of a firm's bank loan that is not drawn down as compensation for a bank's liquidity and opportunity costs. [2] If a

[1] Naturally, this is a sub-sample of all the loans contained in the Thomson Reuters Dealscan database since not all bank loans are for U.S. publicly-traded companies, and not all loans are lines of credit.

[2] As indicated in Bord and Santos (2014), although Dealscan uses the terminology 'All-in-Undrawn spread', when referring to the cost firms pay on undrawn commitments, it is a fee containing both the commitment fee, which is charged on unused loan commitments, and the annual fee, which is charged on the entire committed amount regardless of usage. It should be noted that credit lines contain either commitment fees or facility fees but not both. Thus, 'All-in-Undrawn spread' is not a spread *per se* since the fees are not markups over measures of interest rates such as LIBOR. Incidentally, the Dealscan 'All-in-Drawn spread' is indeed a spread standardized to be measured over LIBOR in the Dealscan database.

firm has a large credit line from a bank and utilizes only a minuscule portion, the firm must compensate the bank for committing to have credit available for the firm to the maximum total facility amount over the life of the facility at the firm's discretion.

Under what circumstances then, would the All-in-Undrawn spread be high; in other words, what does the All-in-Undrawn spread really measure? We propose two hypotheses. The first is that the All-in-Undrawn spread is higher for firms that are assessed *ex ante* by the bank to entail higher distress risk; the second is that the All-in-Undrawn spread is higher for firms that are assessed *ex ante* by the bank to have higher subsequent cash flow volatility (i.e., higher cash flow uncertainty). We denote the first hypothesis as the *distress risk hypothesis* and the second as the *uncertainty risk hypothesis*. We run empirical tests to investigate these two hypotheses and the results are supportive of both.

First, the bank is essentially writing an option to the firm; that is, if the firm is distressed (could be to the point of bankruptcy) and needs additional funding, it can call on the credit line. However, the bank would not necessarily need to do so if it is not distressed. Thus, the All-in-Undrawn spread would be high if the distress (which also entails shortages of liquidity) probability of the firm is high. Thus, in our paper we also investigate whether we can use the information contained in the loan spread to predict the future level of cash flow of the firm. In addition, we confirm the hypothesis that, on average, firms with loans that banks assess to entail a high level of *ex ante* distress risk, as reflected in the All-in-Undrawn spread, would have a lower *ex post* level of cash flow and other proxies of operating performance including return-on-assets (ROA).

Second, the option like feature of the credit line contract has been discussed in detail by Berg et al. (2016). In our paper, we investigate a new aspect and contribute to the literature by studying the asset pricing implication of the AIU spread in the predictability of the cross-section of firm stock returns. In this context, the price of the option would be the AIU spread, and the underlying asset is the firm's creditworthiness, which depends on a number of

factors such as the firm's cash flow, and whether the firm is in a liquidity crisis, as previously noted. However, the standard option pricing literature dictates that, *ceteris paribus*, the more volatile the underlying asset is, the more valuable the option is (Black and Scholes, 1973). Therefore, we borrow the Hypothesis 2 from Berg et al. (2016), which effectively states that 'AIU are increasing functions of the volatility of a borrowers' creditworthiness' and modify it as 'AIU predict low future stock returns of borrowers'. We formulate our hypothesis as such because, although standard asset pricing dictates that more volatile firms should have lower returns, the large body of literature on idiosyncratic volatility (Ang et al., 2009) and empirical discovery of negative risk-return tradeoff[3] have cast significant doubts regarding whether the classic positive risk-return tradeoff predicted by equilibrium models (Merton, 1987) should be held as a central dogma. Therefore, we present an additional puzzle in the same vein as Ang et al. (2006), in that *ex ante* more volatile firms can have lower *ex post* returns. Nonetheless, there are substantial differences in our measures. The AIU spread, and more specifically, the AIUR measure, is the banks' forward looking measure of the volatility of the credit-worthiness of the firm, based on potential private information that commonly arises in loan negotiations (Ivashina and Sun, 2011), whereas the idiosyncratic volatility measure, which is the volatility of the regression residual of a return series relative to an model such as the Fama-French three-factor model, is calculated *ex post* after the return series is known, and there is nothing inherently forward-looking in the idiosyncratic volatility measure.

[3] In addition to the idiosyncratic volatility puzzle, many papers in the option literature have also detected a negative price of risk for volatility based on studies on options of aggregate level index and of individual stocks. See among others, Coval and Shumway (2001), Carr and Wu (2008), Baker et al. (2011), and Frazzini and Pedersen (2014). Hong and Sraer (2016) has theorized that the risk and return trade-off, the cornerstone of modern asset pricing theory, can be of the wrong sign since high-beta assets are more sensitive to investors' disagreement of stock market's prospects, and that high-beta assets are prone to speculative overpricing. There are also behavioral explanations to the negative risk-return trade off (Wang et al., 2017).

However, we should not use All-in-Undrawn spread as a measure of bank's private information since on first-order it is influenced by publicly-known factors such as the firm's credit rating. It should also be noted that the particulars of the loan contracts are announced to the public in corporate news releases, as well as in 8-K and 10-Q filings to the SEC. We therefore first run a regression of AIU spread on publicly-known determinants such as firm's credit rating, size of the loan, profitability, collateral and *etc.*, to obtain a residual that presumably measures banks' private information on the firm's cash flow going forward. These regressors are taken from the existing literature such as Strahan (1999), Graham et al. (2008), and Ross (2010); and we will discuss the construction of the AIUR measure in detail in Section 3.2. Our results are robust whether we construct the AIUR measure with 5-year rolling-window regressions, 10-year rolling-window regressions, or by running a single regression with the whole sample. We then call the residual of the aforementioned regression of the All-in-Undrawn variable on publicly known determinants to be All-in-Undrawn-Residual (AIUR), that we believe should measure banks' private information of subsequent firm performance. In summary, the results we found are as follows:

First, high AIUR firms have low returns 9-month (with varying-degrees of robust results if the time frame varies from 1-month to 15-month) from the start of the loan over low AIUR firms. And the economic significance is large: a long-short strategy can generate an alpha of 7% per annum, which is comparable to the momentum strategy. Our results are robust in a number of robustness checks, including different weighting schemes, and different methods to construct the residual.

Second, with Fama-Macbeth regressions and panel regressions, we find that AIUR can indeed predict the cross-section of firm stock returns over a range of horizons. This effect is not captured by existing explanatory variables such as size, book-to-market ratio, momentum, reversal, asset growth, illiquidity, credit risk, and analyst forecast dispersion.

Third, we show our results are stronger for firms with higher information asymmetry. We

present double-sorting results that indicate our results are stronger in firms with low analyst coverage and in firms with low institutional ownership.

Fourth, we document that firms with higher AIUR have poorer subsequent operating performance. To this end, we construct two measures of firm operating performance, industry-adjusted firm cash flow and industry-adjusted return on assets (ROA). We do find that firms with higher *ex ante* AIUR have lower *ex post* ROA and cash flow, which is consistent with the hypothesis that AIUR is higher for firms that the banks believe *ex ante* to entail higher distress risk.[4]

Finally, we document that firms with higher AIUR have higher *ex post* cash flow volatility. To this end, we construct two measures of cash flow volatility. One is the standard deviation of quarterly operating cash flow over the next two years, and the other is the dispersion of the analysts' one-year-ahead forecast of future firm cash flow, specifically, cash per share, times the shares outstanding and scaled by the book value of total assets, with the analysts' opinion evaluated at two years in the future. We include the second measure since it is a forward-looking assessment of firm cash flow uncertainty that is not yet realized. One can draw an analogy of these two measures with two similar volatility measures of stocks, namely: the historical volatility and option implied volatility of stocks. The former is a backward-looking measure, calculated *ex post*, based on actually realized historical data; the later is a forward-looking measure based on market participants's expectation of future return variation, and these two measures do not necessarily coincide with each other (Bollerslev et al., 2009). With these two measures of cash flow volatility, we find that, whether or not we include a series of control variables including the lagged dependent variable, higher AIUR

[4] Unfortunately, Dealscan does not contain data on whether the credit line is actually drawn or not. Presumably, actual utilization of credit lines happens more frequently in firms encountering cash flow (liquidity) problems. Chodorow-Reich and Falato have used the Shared National Credit (SNC) Program data set which does contain information on the draw down of the unused portion of the credit line. However, the SNC data set can only be accessed by Federal Reserve employees upon internal approval.

can indeed predict higher cash flow volatility in the near future. Thus, we also confirm the hypothesis, based on standard option pricing, that higher AIUR is associated with firms that are *ex ante* assessed by the banks to have cash flow volatility.

To the best of our knowledge, this paper is the first one to document the predictability of stock returns based on the information contained in the bank loan undrawn spread. Our contribution is mainly empirical rather than theoretical. Our incremental contribution to the literature is in the following aspects. First, we document another puzzle that casts doubt on the conventional notion of a positive risk-return tradeoff. For decades, a positive risk-return tradeoff has been at the heart of neoclassical asset pricing theory (Sharpe, 1964; Merton, 1973; Ross, 1976). Nevertheless, according to Baker et al. (2011) and Frazzini and Pedersen (2014), high risk stocks, as proxied by beta, actually deliver lower returns *ex post*. The discovery of the idiosyncratic volatility puzzle (Ang et al., 2006) is also contrary to the notion of positive risk-return tradeoff. We present an additional empirical puzzle that challenges the classical positive risk-return tradeoff paradigm. We would like to emphasize that our measure of risk is neither beta, which is contingent upon a theoretical model such as the CAPM, nor the idiosyncratic volatility, which is calculated as the volatility of the regression residual of return series on a model such as the Fama-French three-factor model. Instead, we construct our measure by gauging banks' private information and forward-looking assessment on firms' future prospects.

Second, we document a trading strategy that works in the 1- to 15-month horizon with a sizable alpha. Often, trading strategies generate abnormal returns (alpha) from short-selling overpriced stocks (Stambaugh et al., 2012; Avramov et al., 2009). This is not the case in our strategy, as Figure 1 demonstrates that the abnormal return (alpha) in our long-short strategy comes from the long leg of the long-short portfolio, rather than the short leg. We also want to note the robustness of our strategy with regards to the time horizon, indicating that bank loan contains information that is useful not only for the short-run (1-month ahead), but also for the medium-run (up to 15-month ahead) in terms of return predictability. To

discount the notion that return predictability arises due to known factors, we show through Fama-Macbeth regressions in Section 4.2.1 that our return predictability results are not captured by existing explanatory variables such as size, book-to-market ratio, momentum, asset growth, liquidity, credit risk, and analyst forecast dispersion.

Third, in addition to return predictability, we document that banks' private information, as contained in the AIUR measure, can predict future firm operating performance measured by cash flow level and return on assets (ROA). Moreover, our AIUR measure can predict future firm cash flow volatility, as well as the dispersion of analyst opinions evaluated two years in the future, regarding forecasts of cash per share (CPS) in the further future. To the best of our knowledge, this paper is also the first that uses information contained in bank loans to study the predictability of operating performance and firm cash flow uncertainty.

The remainder of the paper is organized as follows. Section 2 reviews the background and related literature. Section 3 discusses data and the construction of the AIUR measure. We present the empirical results in Section 4. Section 5 concludes the study.

2. Background and Related Literature

Recently, there has been a surge of interest in the role of the financial intermediary in the determination of asset prices. Adrian et al. (2014) use the leverage of security broker-dealers as a proxy for the marginal value of wealth of financial intermediaries, which in turn can price assets as the financial intermediary stochastic discount factor. Similarly, He et al. (2016) have studied the pricing power of financial intermediaries over a variety of asset classes. Like broker-dealers, banks are financial intermediaries and we believe their stance on loan pricing should have asset pricing implications that could manifest as return predictability.

There are two reasons why we focus on credit lines. The first one is that, unlike public debts, the relationship between the bank and the firm involves monitoring and reputation

building, and bank loan negotiations involve private information[5]. And the other reason is the option-like feature. The option-like drawdown feature of credit lines is extensively discussed and empirically confirmed in Berg et al. (2016). Notably, borrowers with high-volatility creditworthiness, whether proxied by volatility of the borrower's profitability (EBITDA/sales) in the five years prior to loan origination, or alternatively proxied by realized volatility of the borrower's equity return over the year prior to the loan origination, are associated with higher upfront and unused fees. The existence of the credit line may also be a proxy for the existence of growth opportunities of the firm (Campello et al., 2011). The role that a bank loan plays in corporate decisions, including investment decisions, has been long studied by finance academics, including (among others), Sufi (2007); Sundaresan and Wang (2007); Bolton et al. (2011); Sundaresan et al. (2015).

3. Data and Measures

3.1. Data

We obtain loan data from Dealscan, a database provided by Loan Pricing Corporation. The database contains comprehensive information on loan pricing and contract details for commercial loans made to companies in the U.S. as well as in other countries. In Dealscan, loans are recorded as facilities that could be packaged into deals. Each deal, consisting of one facility or multiple facilities initiated at the same time, has a single borrower and may have one or more lenders due to loan syndication.

Our sample period spans from January 1994 and ends in December 2016. We focus on the revolving loans (revolving credit lines) of U.S. corporations. With the initial sample

[5] There is a large literature on the uniqueness of bank loans and how terms of lending are determined. See among others, Ivashina (2009), Ivashina and Sun (2011), Diamond (1991), Strahan (1999), Graham et al. (2008), Ross (2010), Bradley and Roberts (2015), Schwert (2017).

from Dealscan, we first merge it with the Compustat database for borrowers' accounting information.[6] And firms are then matched to the Center for Research in Security Prices (CRSP) database for stock data with the linking file from CRSP/Compustat Merged (CCM) database. We further collect information about analyst coverage and analyst earnings forecast from Institutional Brokers Estimate System (I/B/E/S) database. Additionally, our data on institutional holdings come from the Thomson Reuters institutional holding database (form 13F).

3.2. The AIUR Measure

As noted earlier, the AIU spread should not be used directly in our analysis because our focus is banks' private information but the AIU spread presumably contains publicly available information. To represent banks' private information, we use the residual of the regression of AIU spread on a series of loan spread determinants. Specifically, we run the following regression:

$$Log(AIU) = \alpha + \beta Loan\_Charac + \gamma Firm\_Charac + \delta Macroeconomic + \epsilon, \qquad (1)$$

where AIU is the All-in-Undrawn spread which equals to the fees (commitment fee and annual fee) that the borrower must pay its bank for funds committed under the credit line but not drawn down. The regressors in this regression are a set of well-known determinants of loan spread, including loan characteristics, firm characteristics, and variables related to macroeconomic conditions.

[6] We utilize the linktable constructed by Michael Roberts between Dealscan and the merged CRSP-Compustat files on the official WRDS website (Chava and Roberts, 2008), that, in its newest release covers observations from August, 1987 to August, 2012. The link between Dealscan and Compustat is extended to December, 2016.

Following Strahan (1999), we include several well-known loan characteristics in the equation. MATURITY is the natural logarithm of loan maturity, measured in months. AMOUNT is the natural logarithm of the facility amount. SECURED and SECUREDMIS are two indicator variables for the loan secured status. SECURED takes the value of one if the loan is secured by collateral, while SECUREDMIS is equal to one if the information about the loan secured status is missing. We also introduce COVENANTS, the total number of financial covenants in the loan contract, since covenant structure is tightly associated with debt yield (Bradley and Roberts, 2015).

We also incorporate a few firm-level variables that may influence loan pricing. First, larger firms tend to have a lower cost of borrowing, presumably due to easier access to various sources of funding, less information asymmetry and smaller monitoring costs (Graham et al., 2008; Ross, 2010). We use ASSETS, which is the natural logarithm of total assets (Compustat item AT), to represent the borrower's firm size. Second, Ross (2010) suggests that Tobin's Q of the borrower is positively associated with loan spread since it could be a proxy for risk-shifting opportunities. Therefore, we include Tobin's Q in Equation (1). It is calculated as the market value of equity (Compustat item CSHO times Compustat item PRCC_F) plus the difference between total assets and the sum of book value of common shareholder equity (Compustat item CEQ) and deferred taxes (Compustat item TXDB), divided by lagged total assets. In addition, loan spread is expected to be negatively related to the level of assets tangibility because higher tangibility indicates lower firm opaqueness (Strahan, 1999) and a higher recovery rate in the case of default (Graham et al., 2008). Thus, we include TANGIBILITY in our analysis. This variable is the ratio of tangible assets to total assets, where tangible assets are calculated as net property, plant and equipment (Compustat item PPENT) plus total inventories (Compustat item INVT). In addition, as in (Strahan, 1999), we include two indicator variables related to a firm's credit rating status: SPECULATIVE and UNRATED. The former is equal to one if the borrowing firm is rated as speculative grade (S&P rating of BB+ or worse) and zero otherwise, while the latter takes

the value of one if the credit ratings of the borrowing firm are unavailable.

Several additional variables are related to the risk level of the firm. Prior studies (Strahan, 1999; Graham et al., 2008) suggest that firms with a higher leverage ratio tend to face higher borrowing costs since the default risk of these firms is usually considered to be higher. In our regression, LEVERAGE is used to control for this aspect. It is calculated as the sum of total long-term debt (Compustat item DLTT) and debt in current liabilities (Compustat item DLC) divided by total stockholders' equity (Compustat item SEQ). CFVOL is the cash flow volatility which represents the earnings risk of a firm. Following Graham et al. (2008), we define it as the standard deviation of change in the quarterly net cash flow from operating activities (Compustat item OANCFY) over sixteen fiscal quarters prior to the loan initiation, scaled by the sum of total long-term debt (Compustat item DLTT) and debt in current liabilities (Compustat item DLC). Moreover, IDVOL, which is the idiosyncratic volatility as constructed by Ang et al. (2006), is used to capture the idiosyncratic risk of the firm. It is computed as the standard deviation of the residuals from the Carhart (1997) four-factor model with daily stock returns in the past three months. In the calculation, we require at least 20 daily returns of a firm's stock are available over the three-month period.

As in Graham et al. (2008), we also consider the effects of macroeconomic conditions. Specifically, we include TERMSPR and CREDSPR, which represent term spread and credit spread, respectively. Term spread is the difference between the 10-year Treasury yield and the 2-year Treasury yield. And credit spread is the difference between AAA corporate bond yield and BAA corporate bond yield. Finally, we use dummy variables to control for the effect of loan purpose, year-fixed effects and industry effects.

In the main analysis reported in this paper, we estimate Equation (1) with 5-year rolling-

window regressions using facility-level observations.[7] The rationale for the rolling-window procedure is to accommodate the notion that the information contained in loans initiated in the far past may not be relevant now. As robustness checks, we also try other specifications such as estimating the model once with all observations in our sample, as well as running 10-year rolling-window regressions. We find that our main findings remain robust under these alternative specifications. These results on robustness tests are presented in the appendices.

After obtaining the residuals from Equation (1), we aggregate them into firm-month level if multiple facilities are initiated simultaneously. In other words, if a firm initiates multiple facilities within a month, we calculate the weighted average of residuals associated with these facilities where the facility amount is used as the weight. Then, for each borrowing firm in every month, we calculate the moving average of the aggregated residuals of the firm over the past J months. This average residual is labeled as "AIUR". We consider various choices of J in our subsequent analysis, from 3 to 12 months. We choose to use J larger than 1 for two reasons. First, we believe, as with firm fundamentals such as book-to-market ratio and other accounting measures, of which the values at the end of the 'previous' fiscal year are often used (Fama and French, 1992), banks' opinions on firms' future prospects are stable over time, which can justify a choice of J as large as 12. Second, the average number of firms initiating a facility per month is small, thus a choice of J larger than 1 can substantially increase the sample size and allow us to conduct exercises such as portfolio sorts and double-sorts more soundly. Panel A and Panel B in Table 1 present the summary statistics of loan characteristics and the AIUR measure, respectively.

[Insert Table 1 Here]

[7] Starting from the first month in our sample, we estimate one regression in each month. For the initial five years, we add observations month by month. Except for these years, we run the regression with observations in the previous 60 months.

4. Empirical Results

4.1. Portfolio Sorts

To document the relation between AIUR and future stock returns, we first examine the returns of portfolios sorted on this measure. Every month, firms that had ever borrowed a loan within the past J months are ranked into quintile groups based on their AIUR, and one portfolio is formed for each quintile that equally weights the stocks contained in the group. This strategy treats all firms within the quintile group equally. However, it is reasonable to argue that firms that borrowed loans with larger amounts relative to their firm size deserve higher weights since the information contained in the loan spread is likely to be more informative for stock returns of these firms. Therefore, as an alternative strategy, we consider quintile portfolios that weight stocks with the facility amount borrowed by a firm scaled by its book value of total assets. All these portfolios are held for K months. The profitability of portfolios is evaluated with returns in excess of the risk-free rate.[8] We also investigate the portfolio performance by calculating abnormal returns (alpha) from the Fama and French (2015) five-factor model and the Hou et al. (2015) four-factor model using the equally-weighted portfolio returns.[9]

Table 2 presents the portfolio returns where AIUR is constructed as a 9-month moving average of residuals. We investigate the performance of portfolios held for 1, 3, 6, 9, 12, and 15 months, and the results are reported in Panels A through F respectively. Consistent with our conjecture, we find that returns decrease across the AIUR portfolios. Take the portfolio

[8] The monthly risk-free rate is obtained from Kenneth R. French's online data library http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html.

[9] The data on Fama and French (2015) factors are downloaded from Kenneth R. French's online data library. The data on Hou et al. (2015) factors are obtained from Lu Zhang. We thank the authors for sharing the data.

with 6-month holding period as an example. Moving from the lowest AIUR quintile to the highest AIUR quintile, the average monthly equally weighted excess return (EW) decreases monotonically from 1.17% to 0.75%. And the difference of 0.43% is significant at the 1% level ($t = 3.09$). The facility amount weighted portfolio returns (VW) exhibit a similar pattern, with the return spread between the lowest and highest AIUR quintile portfolios equal to 0.57% per month. Moreover, the decreasing pattern holds for abnormal returns (alpha) from the Fama and French (2015) five-factor model and the Hou et al. (2015) four-factor model, and the alpha spreads are also significant at the 1% level. In the case of K equal to 6, the differences in alphas between the lowest AIUR portfolio and the highest AIUR portfolio are 0.51% ($t = 3.86$) and 0.57% ($t = 4.24$) respectively when measured against these two asset pricing models. In the case of J=9 and K=1, the Hou et al. (2015) four-factor model alpha is equal to 0.61% per month ($t = 3.34$), or 7.57% per annum.

[Insert Table 2 Here]

The results in Table 2 suggest that there exists a strong negative relationship between a firm's AIUR and its future stock returns. A zero-investment strategy that longs the lowest AIUR quintile portfolio and shorts the highest AIUR quintile portfolio could generate substantial excess returns. These returns are significant both statistically and economically, robust to different portfolio holding periods, and cannot be explained by risk factors established in recent asset pricing models.

As robustness tests, we experiment with alternative formation periods: J=6, 3, and 12. These results are reported in Table 3, Table 4, and Table 5, respectively. We find that the return spreads between the lowest and highest AIUR quintile portfolios are statistically significant for most J and K combinations. In addition, in general, the economic magnitude of these returns is also comparable to that in Table 2. These results indicate that the predictive power of AIUR for stock returns is robust to various portfolio formation periods.

[Insert Table 3, 4, and 5 Here]

To better demonstrate the performance difference between the lowest and highest AIUR quintile portfolios, we plot the cumulative equally-weighted excess returns of them for certain representative combinations of J and K. As shown in the top left plot (subfigure a) of Figure 1, where J is 9 and K is 3, there is a large difference in these two return series. Indeed, the cumulative excess return of the lowest AIUR portfolio over the 1994 to 2016 period is 1660.43%, while the cumulative excess return of the highest AIUR portfolio is only 279.55%. The other J-K combinations illustrated in Figure 1 yield quantitatively similar results. It should be noted that the abnormal return (alpha) in our long-short strategy originates from the long leg of the long-short portfolio, rather than the short leg, as is often documented in return anomalies literature (Stambaugh et al., 2012; Avramov et al., 2009).

[Insert Figure 1 Here]

4.2. Regression Analysis

The results documented in the previous subsection represent the univariate relation between AIUR and stock returns. To control for other determinants of expected returns, we now implement the regression analysis. Specifically, we run Fama-MacBeth and panel regressions. As in the portfolio sorting analysis, the values for K considered here are 1, 3, 6, 9, 12, and 15. The regression specification is as follows:

$$R_{i,t+1\to t+K} = \alpha + \beta AIUR_{i,t} + \gamma \mathbf{X}_{i,t} + \epsilon_{i,t+1\to t+K}, \tag{2}$$

where $R_{i,t+1\to t+K}$ is the arithmetic average of a firm's monthly excess returns over the K months; $AIUR_{i,t}$ is the AIUR of firm i in month t; and $\mathbf{X}_{i,t}$ represents a set of control variables and includes well-known factors in the asset pricing literature such as reversal, momentum, book-to-market ratio, market leverage, firm size, illiquidity, idiosyncratic volatility, analyst forecast dispersion, asset growth, and credit risk. The coefficient β in Equation (2) is our

focus.

Reversal (R01) is the stock return over the previous month. Momentum (R12) is the stock return over the 11 months preceding the previous month. Book-to-market ratio (BM) is the natural logarithm of the ratio of book value of equity to market value of equity. Market leverage (ML) is the natural logarithm of the market leverage ratio defined as book value of long-term debt divided by the sum of market value of equity and book value of long-term debt. Firm size (SZ) is the log of the market value of equity. The monthly illiquidity measure based on Amihud (2002) (ILLIQ) is defined as the monthly average of the ratio of absolute daily stock return to daily dollar volume (in millions). We calculate this measure for stocks with valid trading data for at least 10 days in the month. To account for the effect of idiosyncratic volatility documented in Ang et al. (2006), we include IDVOL which is defined as in Section 3.2. Given that stocks with higher analyst dispersion earn lower future returns (Diether et al., 2002), we control the analyst forecast dispersion (DISP). It is the standard deviation of analysts' current-fiscal-year annual earnings per share forecasts scaled by the absolute value of the mean forecast. In addition, we introduce the growth rate of total assets in the previous fiscal year (AG) since Cooper et al. (2008) document a strong negative relationship between a firm's asset growth and subsequent abnormal returns. Finally, Avramov et al. (2009) show that high credit risk firms earn lower future returns than low credit risk firms. Thus, we include UNRATED and SPECULATIVE as control variables in the return regressions, and they are defined as in Section 3.2.

4.2.1. Fama-MacBeth Regressions

Table 6 reports the results of Fama-MacBeth regressions where AIUR is calculated with J equal to 9. The coefficients are the time-series average of estimated coefficients from monthly cross-sectional regressions and the t-statistic is computed based on Newey-West adjusted standard errors. Panel A shows the results for 1-, 3-, and 6-month average returns, while

Panel B presents the results for 9-, 12-, and 15-month average returns. Columns (1), (6), and (11) show the results when AIUR alone is included as the regressor. We find that the coefficients on AIUR are all negative, with the magnitude varying from -0.14% to -0.50%, and they are statistically significant. This finding confirms our results in Section 4.1. According to Columns (3), (8), and (13), after including the first set of control variables, the coefficients on AIUR remain significantly negative, with statistical significance varying from 1% level to 5% level. For example, when K equals to 6 (Column (13) in Panel A), the coefficient on AIUR is -0.23% with a t-statistic of 2.87. Furthermore, we find that although adding illiquidity, idiosyncratic volatility, analyst dispersion, asset growth, and credit rating dummies slightly reduces the magnitude of the coefficient on AIUR (shown in Columns (5), (10), and (15)), the negative relation between AIUR and stock returns remains significant at least at the 5% level. The results from these multivariate regressions suggest that firms with high AIUR will under-perform firms with low AIUR in the future, and this effect cannot be absorbed by a set of existing determinants of stock returns.

[Insert Table 6 Here]

As in Section 4.1, we also examine the specifications with J equal to 6, 3, and 12. The corresponding results are presented in Table 7, Table 8, and Table 9, respectively. We find that these results are quantitatively and qualitatively similar to those in Table 6. For example, consider the case of K equal to 6, the coefficients on AIUR from the multivariate regressions are -0.25%, -0.28%, and -0.19%, respectively, when J equals to 6 (Column (15) in Panel A of Table 7), 3 (Column (15) in Panel A of Table 8), and 12 (Column (15) in Panel A of Table 9). And all these three coefficients are statistically significant at the 1% level ($t = 2.97, 2.36$, and 2.81, respectively). In other words, the negative relation between AIUR and stock returns documented above does not rely on the choice of the value for J.

[Insert Table 7, 8, and 9 Here]

4.2.2. Panel Regressions

To check whether our results are robust to alternative regression frameworks, we rerun the analysis with panel regressions, in which standard errors are clustered by firm and month. As shown in Tables 10 through 13, where AIUR is computed with J equal to 9, 6, 3, and 12, respectively, the coefficients on AIUR remain negative and are statistically significant in most cases. Take the case where J equals to 9 and K equals to 6 as an example. As shown in Column (15) in Panel A of Table 10, the coefficient on AIUR is -0.39% ($t = 3.46$) after controlling other determinants of expected stock return. The results in this subsection provides additional supporting evidence for our hypothesis that higher AIUR predicts lower future stock returns of borrowing firms.

[Insert Table 10, 11, 12, and 13 Here]

4.3. Information Environment

If, as we argue, AIUR represents banks' private information about borrowing firms, we may expect that AIUR is more informative for firms with worse information environment. To test this conjecture, we explore the variation in returns across AIUR portfolios conditional on proxies of information asymmetry.

As important information intermediaries, financial analysts are closely related to the information environment of firms. The prior research suggests that several characteristics of analyst forecasts could serve as indicators for information asymmetry (Lang and Lundholm, 1996; Lang et al., 2003). We follow these studies and construct two measures: analyst coverage and analyst forecast error. Specifically, analyst coverage refers to the total number of financial analysts following the firm during the fiscal year, and analyst forecast error is defined as the absolute difference between the actual annual earnings per share and the mean of analysts' estimates, scaled by the absolute value of actual earnings. A higher value of

analyst coverage indicates lower information asymmetry and better information environment, while a larger forecast error represents worse information environment.

Our double-sort analysis is conducted as follows. Each month, we first split firms that borrowed loans over the past J months into two groups by the median of analyst coverage, and firms in each group are then sorted into quintile portfolios based on AIUR. These portfolios are held for K months. The first two columns in Table 14 report the return spreads between the highest and lowest AIUR quintile portfolios in the low and high analyst coverage group respectively, with J equal to 9.[10] The results show that AIUR significantly predicts returns only among firms with low analyst coverage. For example, when the portfolios are held for 6 months, the spread in equally weighted excess returns (EW) in the low analyst coverage group is -0.60%, which is statistically significant at the 1% level ($t = 2.78$). In contrast, the return difference in the high analyst coverage is only -0.05% and it is statistically insignificant ($t = 0.26$). Similarly, when the portfolio performance is measured using facility amount weighted returns (VW), abnormal returns (alpha) from the Fama and French (2015) five-factor model and the Hou et al. (2015) four-factor model, the return spread in the low analyst coverage group is -0.70%, -0.78%, and -0.91%, respectively; and all are significant at the 1% level. However, the corresponding return spreads in the high analyst coverage group are not significantly different from zero.

[Insert Table 14 Here]

Next, we split the sample based on the median analyst forecast error. As shown in Table 14 (the middle two columns), the return spreads among firms with high forecast error are significantly negative. For example, when the holding period is 3 months, the return differences between the highest and lowest AIUR quintile portfolios in the high forecast error

[10] For the analysis in this section and the subsequent sections, we focus on the case where J is equal to 9. We repeat all the analysis for J equal to 3, 6, and 12, and obtain similar results. Although these results are not tabulated for brevity, they are available from the authors upon request.

group could vary from -0.44% to -0.74%, depending on performance measures, and they are significant at least at 5% level. Conversely, in the low forecast error group, return spreads have smaller magnitude and they are not statistically significant.

Finally, we focus on the effects of AIUR conditional on institutional ownership. Previous studies suggest institutional investors could enhance firms' information environment by influencing their disclosure policy (Ajinkya et al., 2005; Boone and White, 2015).[11]. Thus, we expect the effect of AIUR to be stronger for firms with lower institutional ownership. The last two columns in Table 14 present the results when the sample is partitioned by the median value of institutional ownership. The institutional ownership is defined as the percentage of shares outstanding owned by institutions measured at the end of the previous quarter. Consistent with our conjecture, we find that the outperformance of low AIUR firms relative to high AIUR firms is concentrated among firms with low institutional ownership. Consider the case where K is equal to 12 as an example. Although the return spreads in the high institutional ownership group are negative, they are statistically insignificant. However, in the low institutional ownership group, the return differences between the highest and lowest AIUR quintile portfolios are significantly negative, regardless of which performance measure is used.

Overall, the results in this section imply that AIUR has higher predictive power for future stock returns when the firm suffers from greater information asymmetry. And this conditional effect of AIUR is robust to alternative portfolio formation periods and holding periods.

[11] Earlier papers show that institutional investors are likely to be attracted by firms with more voluntary disclosures (Healy et al., 1999; Bushee and Noe, 2000). These findings also indicate institutional ownership is positively associated with firms' information environment.

4.4. AIUR and Operating Performance

4.4.1. Level of Cash Flow

We have so far shown that the AIUR measure has strong predictive power for future stock returns presumably because banks possess private information about the future prospects of borrowing firms. One particular type of private information banks could possibly have is the information related to firms' future operating activities. If, based on their assessment, banks perceive a firm would become less profitable or would have decreased cash flow (or decreased liquidity) and thus entail higher distress risk, they would charge a higher All-in-Undrawn spread since the credit line, as an insurance against liquidity crisis and financial distress, is now more valuable for such a firm. Therefore, one may expect that higher AIUR indicates poorer future operating performance. To explore whether this is the case, we estimate the following regression:

$$Performance_{i,t+1} = \alpha + \beta AIUR_{i,t} + \gamma \mathbf{X}_{i,t} + Year\text{-}month + Industry + \epsilon_{i,t+1}, \qquad (3)$$

where $Performance_{i,t+1}$ is the operating performance in fiscal year $t+1$; $AIUR_{i,t}$ is the monthly AIUR in year t and is the variable of interest; $\mathbf{X}_{i,t}$ represents a vector of control variables; $Year\text{-}month$ and $Industry$ are the year-month and industry fixed effects.

We consider two proxies of operating performance: operating cash flow (CF) and return on assets (ROA). CF is the earnings before interest, taxes, depreciation and amortization (Compustat item OIBDP) scaled by the book value of total assets (Compustat item AT), and ROA is the net income (Compustat item NI) divided by total assets. To account for the difference in the nature of operation in different industries, we adjust these measures by subtracting their industry median based on Fama and French's (1997) 48-industry classification.

The regression results are presented in Table 15. The dependent variable in the first three columns is industry-median-adjusted operating cash flow. Column (1) includes only the AIUR and time and industry fixed effects. We find that AIUR is significantly and negatively associated with future cash flow. To account for the impact of past performance, we introduce the lagged operating performance in Column (2). The magnitude of the coefficient on AIUR decreases; however, it remains highly significant.

[Insert Table 15 Here]

In Column (3), we consider additional controls that may influence firm performance. We include the control variables contained in the return regressions. Additionally, based on the existing literature (e.g., Larcker et al., 2013; Francis et al., 2016), we add the following: the ratio of R&D expenses to sales (R&D); the natural logarithm of firm age (AGE), where a firm's age refers to the number of years since its first appearance in Compustat; the natural logarithm of total assets (ASSETS); and the natural logarithm of total sales (SALES). After introducing these variables, the coefficient on AIUR remains negative (-0.61) and significant at the 1% level ($t = 7.94$). The finding that high AIUR predicts low operating cash flow is consistent with the hypothesis that AIUR reflects banks' private information about borrowers' subsequent operating performance.

Columns (4) through (6) of Table 15 present the results from the regressions of industry-median-adjusted ROA. The results are similar to the cash flow results. Essentially, the coefficients on AIUR are negative and significant. For instance, in the full model shown in Column (6), the coefficient on AIUR is -0.75 ($t = 7.66$). In summary, the evidence in this subsection suggests that firms with high *ex ante* AIUR would have poor subsequent operating performance. In other words, these results support our distress risk hypothesis.

4.4.2. Volatility of Cash Flow

After documenting the relation between AIUR and the level of subsequent cash flow, we now turn to the volatility of future cash flow. As discussed in Berg et al. (2016), a credit line can be viewed as an option where the writer (i.e., the bank) grants the purchaser (i.e., the firm) the right to borrow money from the writer when the buyer decides to do so. From this perspective, the AIU spread is the price of the option which depends on, among others, the volatility of the underlying asset. And the option pricing theory suggests that, *ceteris paribus*, the option price should increase with the volatility of the underlying asset. Therefore, with everything else being equal, banks would charge a higher spread if they anticipate that the firm's performance will be more volatile. In other words, AIUR may contain banks' private information about firms' future cash flow volatility: higher AIUR predicts higher cash flow volatility.

To examine whether this conjecture is true, we run a regression similar to Equation (3):

$$Cash\ Flow\ Volatility_{i,t+1} = \alpha + \beta AIUR_{i,t} + \gamma \mathbf{X}_{i,t} + Year\text{-}month + Industry + \epsilon_{i,t+1}, \quad (4)$$

where the dependent variable is future cash flow volatility; $AIUR_{i,t}$ is the monthly AIUR in year t and is the variable of interest; $\mathbf{X}_{i,t}$ represents a vector of control variables including the lagged dependent variable, reversal, momentum, book-to-market ratio, market leverage, firm size, illiquidity, idiosyncratic volatility, asset growth, credit risk, R&D expenses, firm age, total assets, and total sales. In addition, we include year-month and industry fixed effects.

Following prior studies (e.g., Gao et al., 2013), we first measure cash flow volatility with the standard deviation of quarterly operating cash flow that is realized over the next two years, where the operating cash flow is computed as earnings before interest, taxes, depreciation and amortization (Compustat item OIBDPQ) scaled by total assets (Compustat

item ATQ) and is adjusted by subtracting the industry median in a given Fama and French 48 industry and quarter. The results are reported in the first three columns of Table 16. In Column (1), we regress the cash flow volatility on AIUR and include the time and industry fixed effects. Consistent with our expectation, the coefficient on AIUR is positive (0.08), with a t-statistic of 5.36. To account for the effect of historical volatility, we introduce the lagged dependent variable which is the standard deviation of quarterly operating cash flow over the past two years. As shown in Column (2), the coefficient on AIUR remains positive (0.06) and significant at 1% level ($t = 5.48$). In Column (3), we further include additional control variables as in Table 15. We find that the positive relation between AIUR and cash flow volatility remains significant ($t = 6.00$). These results support our conjecture that a higher AIUR predicts higher subsequent cash flow volatility.

[Insert Table 16 Here]

As an alternative measure of cash flow volatility, we consider the dispersion of analysts' forecasts on the firm's future cash flow. Specifically, we calculate the standard deviation of analysts' one-year-ahead forecast (I/B/E/S item FY1) of cash per share times the shares outstanding and scaled by the book value of total assets, where the analysts' opinion is evaluated at two years in the future. The regression results (reported in the last three columns of Table 16) show that the nalyst dispersion on future cash flow is higher for firms with higher AIUR.[12] After including the lagged dependent variable (i.e., the dispersion of analysts' one-year-ahead forecasts evaluated in the current year) and other control variables, the coefficient on AIUR is 1.31, with a t-statistic of 3.38. To conclude, the results in this subsection show that high AIUR is associated with high subsequent cash flow volatility, and this is consistent with our uncertainty risk hypothesis.

[12] The number of observations decreases because the analysts' forecasts on cash flow per share for certain firms in our loan sample are not available in I/B/E/S.

5. Conclusion

By analyzing a large sample of credit lines, we document a novel empirical finding that banks' private information contained in All-in-Undrawn spread can robustly predict the cross-section of subsequent firm performance. We construct a measure, denoted as AIUR, by running a regression of the logarithm of the All-in-Undrawn spread on a set of well-documented determinants of the loan spread. We believe AIUR is a measure of bank's private information on the firm's distress risk as well as the cash flow uncertainty going forward. We find firms with higher *ex ante* AIUR would subsequently have lower stock returns, lower ROA, lower cash flows, and higher cash flow volatility. Indeed, a long-short strategy based on our AIUR measure can generate a sizable alpha in the 9-month (robust to the choice of holding period whether it is 1-month or 15-month) following the start of the loan. The results are confirmed with Fama-Macbeth regressions and panel regressions, and are robust to the choice of the holding period and the methodology.

If the terms of the credit facilities can be found in firms' 8-K, 10-K and 10-Q reports, why do we find predictability results at all? We argue that not all information that is used by banks to make decisions in their roles as financial intermediaries, and as lenders in particular, is released to the public and banks have substantial private information on their clients. Furthermore, the public fail to instantaneously incorporate the terse information that is revealed through the terms of the facility agreements, although on the surface they reflect the underlying private information that banks use to determine the terms of the loans, including undrawn spreads. Indeed, the double-sorting results on the relationship between measures of information asymmetry and AIUR confirm that, our AIUR results are more pronounced in firms with low analyst coverage, and in firms with low institutional ownership.

Finally, why is the sign of the return predictability results contrary to the prevalent notion of a positive risk-return tradeoff? Presumably, firms with higher *ex ante* uncertainty

should have higher risk and thus command higher returns; however, we find these firms offer lower returns *ex post*. Therefore, we present an additional puzzle that is similar to the idiosyncratic volatility puzzle documented by Ang et al. (2006) and the negative risk-return tradeoff phenomenon as documented by Wang et al. (2017).

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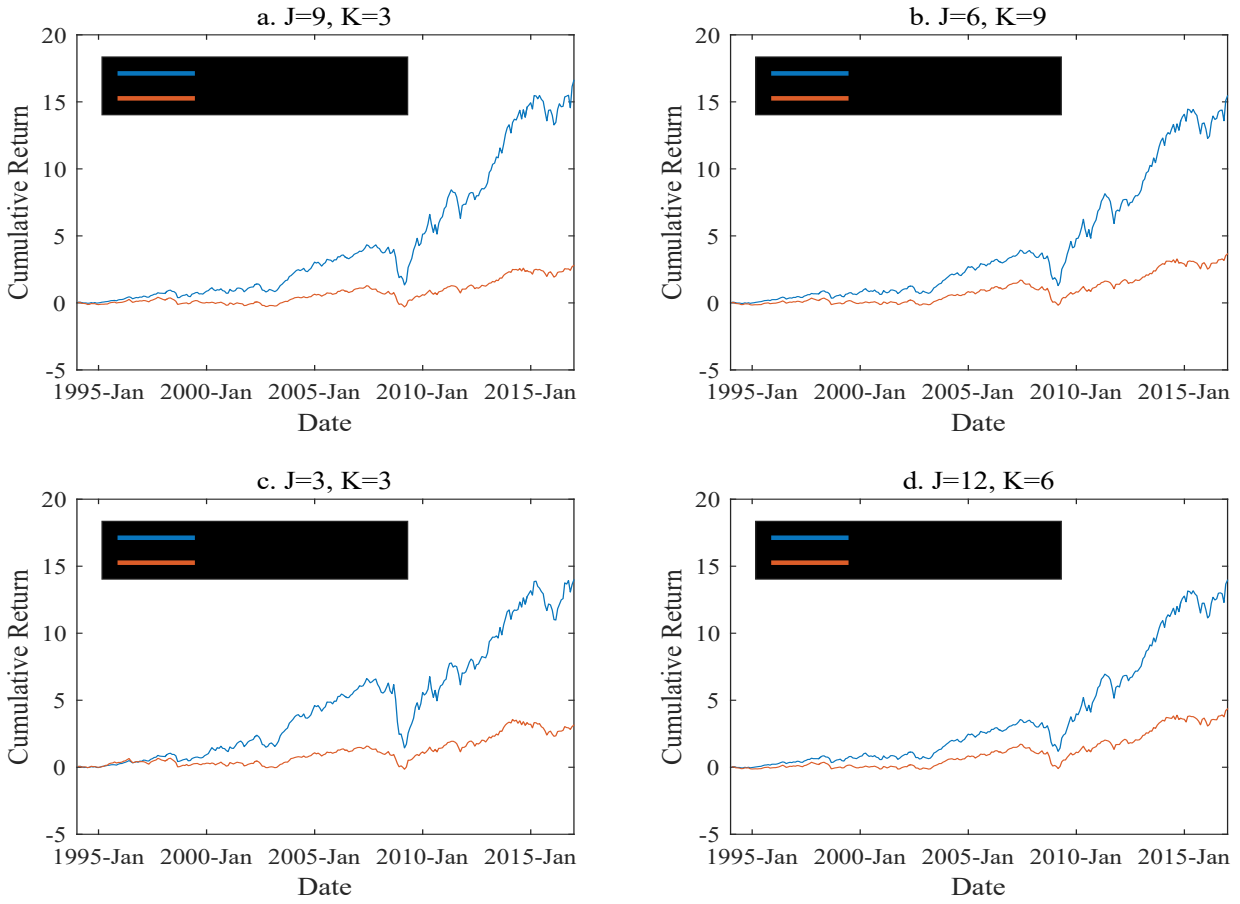

Figure 1
Cumulative Returns of AIUR Portfolios

This figure plots the cumulative monthly equally weighted excess returns of portfolios sorted on AIUR. The AIUR measure is constructed as the J-month moving average of residuals from 5-year rolling-window regressions of the logarithm of all-in-undrawn spread on a set of loan spread determinants. Every month, firms which borrowed loans over the past J months are sorted into quintile portfolios based on AIUR and held for K months. The cumulative returns of portfolio with the lowest AIUR (Low AIUR Portfolio) and portfolio with the highest AIUR (High AIUR Portfolio) are plotted for different J and K combinations. The top left plot (subfigure a) is for J=9 and K=3. The top right plot (subfigure b) is for J=6 and K=9. The bottom left plot (subfigure c) is for J=3 and K=3. The bottom right plot (subfigure d) is for J=12 and K=6. The sample period is from January 1994 to December 2016.

Table 0
Variable Definitions

Variable	Definition
AG	the growth rate of total assets in the previous fiscal year
AGE	the number of years since a firm's first appearance in Compustat
AIUR	the J-month moving average of residuals from regressions of the logarithm of all-in-undrawn spread on a set of loan spread determinants
AMOUNT	the natural logarithm of facility amount
Analyst Coverage	the total number of analysts following the firm in the fiscal year
Analyst Dispersion on Cash Flow	the standard deviation of the analysts' one-year-ahead forecast (I/B/E/S item FY1) of future firm cash flow, specifically, cash per share (or CPS), times the shares outstanding and scaled by the book value of total assets, with the analysts' opinion evaluated at two years in the future
Analyst Forecast Error	the absolute difference between the actual earnings and the mean forecast by all analysts, scaled by the absolute value of actual earnings
ASSETS	the natural logarithm of total assets (Compustat item AT)
BM	the natural logarithm of the ratio of book value of equity to market value of equity, where book value of equity is the sum of book value of common shareholder equity (Compustat item CEQ) and deferred taxes (Compustat item TXDB), and market value of equity is monthly closing price times number of shares outstanding
CFVOL	the standard deviation of change in quarterly net cash flow from operating activities (Compustat item OANCFY) over sixteen fiscal quarters prior to the loan initiation, scaled by the sum of total long-term debt (Compustat item DLTT) and debt in current liabilities (Compustat item DLC)
Cash Flow Volatility	the standard deviation of industry-median-adjusted quarterly operating cash flow that is realized over the next two years, where quarterly operating cash flow is the earnings before interest, taxes, depreciation and amortization (Compustat item OIBDPQ) scaled by total assets (Compustat item ATQ)
COVENANTS	the total number of financial covenants in the loan contract
CREDSPR	the difference between AAA corporate bond yield and BAA corporate bond yield
DISP	the standard deviation of analysts' current-fiscal-year annual earnings per share forecasts scaled by the absolute value of the mean forecast
IDVOL	the standard deviation of the residuals from the Carhart (1997) four-factor model with daily stock returns in the past three months
ILLIQ	the monthly average of the ratio of absolute daily stock return to daily dollar volume (in millions)
Industry-adjusted CF	industry-median-adjusted annual operating cash flow, where operating cash flow is the earnings before interest, taxes, depreciation and amortization (Compustat item OIBDP) scaled by total assets (Compustat item AT)
Industry-adjusted ROA	industry-median-adjusted annual return on assets, where return on assets is net income (Compustat item NI) divided by total assets (Compustat item AT)
Institutional Ownership	the percentage of shares owned by institutions
LEVERAGE	the sum of total long-term debt (Compustat item DLTT) and debt in current liabilities (Compustat item DLC) divided by total stockholders' equity (Compustat item SEQ)
MATURITY	the natural logarithm of loan maturity, measured in months
ML	the natural logarithm of the market leverage ratio, defined as book value of long-term debt (Compustat item DLTT) divided by the sum of market value of equity and book value of long-term debt
Q	the market value of equity (Compustat item CSHO times Compustat item PRCC_F) plus the difference between total assets (Compustat item AT) and the sum of book value of common shareholder equity (Compustat item CEQ) and deferred taxes (Compustat item TXDB), divided by lagged total assets
R01	the stock return over the previous month
R12	the stock return over the 11 months preceding the previous month
R&D	the ratio of research and development expenses (Compustat item XRD) to sales (Compustat item SALE)
SALES	the natural logarithm of sales (Compustat item SALE)
SECURED	dummy variable which equals to one if the loan is secured by collateral and zero otherwise
SECUREDMIS	dummy variable which equals to one if the information about the loan secured status is missing and zero otherwise
SPECULATIVE	dummy variable which equals to one if the borrowing firm is rated as speculative grade (S&P rating of BB+ or worse) and zero otherwise
SZ	the log of the market value of equity
TANGIBILITY	the sum of net property, plant and equipment (Compustat item PPENT) and total inventories (Compustat item INVT), scaled by total assets (Compustat item AT)
TERMSPR	the difference between the 10-year Treasury yield and the 2-year Treasury yield
UNRATED	dummy variable which equals to one if credit rating of the borrowing firm is not available and zero otherwise

Table 1

Summary Statistics

This table reports the descriptive statistics. Panel A summarizes loan characteristics. All-in-Undrawn spread is the fees (commitment fee and annual fee) that the borrower pays its bank for funds committed under the credit line but not drawn down, measured in basis point. AMOUNT is the natural logarithm of facility amount. MATURITY is the natural logarithm of loan maturity, measured in months. COVENANTS is the total number of financial covenants in the loan contract. Panel B reports the summary statistics of AIUR, which is constructed as the J-month moving average of residuals from 5-year rolling-window regressions of the logarithm of all-in-undrawn spread on a set of loan spread determinants. Panel C presents the summary statistics of firm characteristics. The detailed definitions of these variables are provided in Table 0.

Panel A: Loan Characteristics

	Mean	Standard Deviation	Minimum	Median	Maximum
All-in-Undrawn spread	32.315	21.127	0.220	25.000	500.000
AMOUNT	18.586	1.603	12.429	18.668	23.901
MATURITY	3.744	0.554	0.000	3.892	5.193
COVENANTS	1.346	1.354	0.000	1.000	8.000

Panel B: AIUR

	Mean	Standard Deviation	Minimum	Median	Maximum
J=3	-0.004	0.410	-3.331	0.002	2.251
J=6	-0.004	0.408	-3.375	0.003	2.271
J=9	-0.005	0.406	-3.393	0.002	2.294
J=12	-0.007	0.403	-3.397	0.002	2.294

Panel C: Firm Characteristics

	Mean	Standard Deviation	Minimum	Median	Maximum
SZ	13.996	1.834	6.440	13.949	19.803
BM	0.652	1.081	-33.184	0.499	65.657
ML	0.260	0.211	0.000	0.211	0.990
ILLIQ	0.233	4.321	0.000	0.002	921.667
IDVOL	2.240	1.522	0.099	1.839	33.007
DISP	0.565	6.620	0.000	0.090	667.430
AG	0.189	0.747	-0.844	0.072	102.790
UNRATED	0.396	0.489	0.000	0.000	1.000
SPECULATIVE	0.286	0.452	0.000	0.000	1.000
Analyst Coverage	12.281	9.188	1.000	10.000	57.000
Analyst Forecast Error	0.505	2.920	0.000	0.080	133.297
Institutional Ownership	0.608	0.246	0.000	0.662	0.966
Industry-adjusted CF	4.814	12.611	-117.582	2.924	163.759
Industry-adjusted ROA	2.031	12.831	-202.136	1.619	212.807
Cash Flow Volatility	1.309	1.512	0.000	0.870	26.698
Analyst Dispersion on Cash Flow	3.845	32.455	0.010	1.334	1548.711

Table 2

Returns of AIUR Portfolios: J=9

This table reports the monthly excess returns or abnormal returns (in percentage) of quintile portfolios sorted on AIUR, which is constructed as the J-month moving average of residuals from 5-year rolling-window regressions of the logarithm of all-in-undrawn spread on a set of loan spread determinants. Every month, firms which borrowed loans over the past J months are sorted into quintile portfolios based on the AIUR measure and held for K months. The average monthly equally weighted excess returns (EW), the average monthly weighted excess returns with the facility amount scaled by total assets as the weight (VW), abnormal returns (alpha) from Fama and French (2015) five-factor model and Hou et al. (2015) four-factor model are presented in each panel for different values of K. The sample period is from January 1994 to December 2016. *t*-statistics for the return spread between the highest and lowest AIUR quintile portfolios are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

	AIUR						
	L	2	3	4	H	H-L	*t*--stat
Panel A: J=9, K=1							
EW	1.44	1.09	1.22	0.97	0.89	-0.55***	(2.90)
VW	1.52	1.10	1.22	0.81	0.86	-0.66**	(2.31)
FF 5-factor alpha	0.28	-0.00	-0.04	-0.07	-0.27	-0.55***	(3.04)
HXZ 4-factor alpha	0.63	0.31	0.16	0.23	0.02	-0.61***	(3.34)
Panel B: J=9, K=3							
EW	1.21	0.99	1.01	0.90	0.69	-0.52***	(3.41)
VW	1.27	0.98	1.02	0.76	0.63	-0.64***	(3.01)
FF 5-factor alpha	0.33	0.03	-0.00	-0.03	-0.18	-0.51***	(3.65)
HXZ 4-factor alpha	0.56	0.23	0.12	0.12	-0.03	-0.59***	(4.11)
Panel C: J=9, K=6							
EW	1.17	1.00	0.97	0.94	0.75	-0.43***	(3.09)
VW	1.25	1.06	0.93	0.87	0.68	-0.57***	(3.02)
FF 5-factor alpha	0.36	0.05	-0.01	-0.03	-0.14	-0.51***	(3.86)
HXZ 4-factor alpha	0.58	0.24	0.14	0.12	0.02	-0.57***	(4.24)
Panel D: J=9, K=9							
EW	1.16	1.02	0.96	0.96	0.79	-0.37***	(2.97)
VW	1.26	1.10	0.91	0.92	0.72	-0.53***	(3.02)
FF 5-factor alpha	0.35	0.09	-0.02	-0.02	-0.13	-0.48***	(4.01)
HXZ 4-factor alpha	0.55	0.26	0.15	0.15	0.04	-0.51***	(4.17)
Panel E: J=9, K=12							
EW	1.10	1.05	0.95	0.95	0.80	-0.29**	(2.38)
VW	1.17	1.13	0.90	0.93	0.75	-0.41**	(2.44)
FF 5-factor alpha	0.28	0.13	-0.03	-0.04	-0.12	-0.40***	(3.42)
HXZ 4-factor alpha	0.46	0.30	0.14	0.15	0.06	-0.40***	(3.38)
Panel F: J=9, K=15							
EW	1.05	1.05	0.94	0.92	0.78	-0.28**	(2.27)
VW	1.10	1.10	0.89	0.91	0.77	-0.33**	(1.99)
FF 5-factor alpha	0.24	0.13	-0.05	-0.06	-0.14	-0.38***	(3.33)
HXZ 4-factor alpha	0.41	0.30	0.13	0.14	0.04	-0.37***	(3.21)

Table 3

Returns of AIUR Portfolios: J=6

This table reports the monthly excess returns or abnormal returns (in percentage) of quintile portfolios sorted on AIUR, which is constructed as the J-month moving average of residuals from 5-year rolling-window regressions of the logarithm of all-in-undrawn spread on a set of loan spread determinants. Every month, firms which borrowed loans over the past J months are sorted into quintile portfolios based on the AIUR measure and held for K months. The average monthly equally weighted excess returns (EW), the average monthly weighted excess returns with the facility amount scaled by total assets as the weight (VW), abnormal returns (alpha) from Fama and French (2015) five-factor model and Hou et al. (2015) four-factor model are presented in each panel for different values of K. The sample period is from January 1994 to December 2016. *t*-statistics for the return spread between the highest and lowest AIUR quintile portfolios are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

	AIUR						
	L	2	3	4	H	H-L	*t*--stat
Panel A: J=6, K=1							
EW	1.38	1.25	1.29	0.96	0.98	-0.40*	(1.90)
VW	1.51	1.25	1.30	0.84	0.95	-0.55*	(1.72)
FF 5-factor alpha	0.22	0.16	0.02	-0.16	-0.20	-0.42**	(2.09)
HXZ 4-factor alpha	0.55	0.46	0.24	0.18	0.13	-0.42**	(2.04)
Panel B: J=6, K=3							
EW	1.10	1.05	1.08	0.89	0.80	-0.30*	(1.74)
VW	1.21	1.06	1.09	0.75	0.73	-0.48*	(1.93)
FF 5-factor alpha	0.18	0.12	0.04	-0.09	-0.09	-0.27	(1.61)
HXZ 4-factor alpha	0.39	0.30	0.13	0.10	0.08	-0.31*	(1.83)
Panel C: J=6, K=6							
EW	1.16	1.00	1.02	0.94	0.75	-0.41**	(2.51)
VW	1.24	1.03	0.99	0.82	0.73	-0.51**	(2.33)
FF 5-factor alpha	0.27	0.08	-0.01	0.00	-0.11	-0.38**	(2.39)
HXZ 4-factor alpha	0.49	0.29	0.11	0.15	0.04	-0.45***	(2.87)
Panel D: J=6, K=9							
EW	1.18	1.00	0.96	0.96	0.76	-0.42***	(3.02)
VW	1.27	1.05	0.94	0.88	0.72	-0.55***	(2.87)
FF 5-factor alpha	0.34	0.07	-0.05	-0.00	-0.14	-0.48***	(3.50)
HXZ 4-factor alpha	0.55	0.26	0.10	0.16	0.02	-0.53***	(3.84)
Panel E: J=6, K=12							
EW	1.13	1.05	0.95	0.96	0.82	-0.31**	(2.47)
VW	1.22	1.13	0.92	0.91	0.78	-0.43**	(2.50)
FF 5-factor alpha	0.31	0.13	-0.05	-0.03	-0.10	-0.41***	(3.39)
HXZ 4-factor alpha	0.49	0.30	0.11	0.15	0.07	-0.42***	(3.47)
Panel F: J=6, K=15							
EW	1.07	1.07	0.95	0.95	0.82	-0.25**	(2.06)
VW	1.13	1.13	0.92	0.92	0.80	-0.32*	(1.96)
FF 5-factor alpha	0.24	0.15	-0.05	-0.04	-0.09	-0.33***	(2.85)
HXZ 4-factor alpha	0.42	0.32	0.12	0.15	0.08	-0.33***	(2.83)

Table 4

Returns of AIUR Portfolios: J=3

This table reports the monthly excess returns or abnormal returns (in percentage) of quintile portfolios sorted on AIUR, which is constructed as the J-month moving average of residuals from 5-year rolling-window regressions of the logarithm of all-in-undrawn spread on a set of loan spread determinants. Every month, firms which borrowed loans over the past J months are sorted into quintile portfolios based on the AIUR measure and held for K months. The average monthly equally weighted excess returns (EW), the average monthly weighted excess returns with the facility amount scaled by total assets as the weight (VW), abnormal returns (alpha) from Fama and French (2015) five-factor model and Hou et al. (2015)) four-factor model are presented in each panel for different values of K. The sample period is from January 1994 to December 2016. *t*-statistics for the return spread between the highest and lowest AIUR quintile portfolios are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

	AIUR						
	L	2	3	4	H	H-L	*t*--stat
Panel A: J=3, K=1							
EW	1.47	0.90	1.55	0.75	0.80	-0.67**	(2.48)
VW	1.64	0.90	1.66	0.52	1.01	-0.63	(1.54)
FF 5-factor alpha	0.17	-0.04	0.09	-0.33	-0.38	-0.55**	(2.17)
HXZ 4-factor alpha	0.43	0.18	0.41	0.08	-0.10	-0.53**	(2.03)
Panel B: J=3, K=3							
EW	1.18	1.00	1.14	0.76	0.74	-0.44**	(2.09)
VW	1.25	0.98	1.25	0.67	0.79	-0.46	(1.51)
FF 5-factor alpha	0.21	0.08	0.07	-0.27	-0.21	-0.41**	(2.05)
HXZ 4-factor alpha	0.38	0.18	0.19	-0.03	-0.02	-0.40**	(2.00)
Panel C: J=3, K=6							
EW	1.07	1.04	1.10	0.88	0.82	-0.26	(1.49)
VW	1.15	1.08	1.11	0.81	0.87	-0.28	(1.16)
FF 5-factor alpha	0.17	0.13	0.04	-0.10	-0.07	-0.24	(1.43)
HXZ 4-factor alpha	0.38	0.30	0.16	0.09	0.08	-0.29*	(1.76)
Panel D: J=3, K=9							
EW	1.18	1.01	0.98	0.98	0.70	-0.49***	(3.25)
VW	1.23	1.06	0.97	0.92	0.73	-0.50**	(2.51)
FF 5-factor alpha	0.27	0.07	-0.03	-0.00	-0.16	-0.43***	(2.99)
HXZ 4-factor alpha	0.49	0.26	0.12	0.16	-0.02	-0.51***	(3.48)
Panel E: J=3, K=12							
EW	1.16	1.02	0.94	0.97	0.78	-0.38***	(2.92)
VW	1.25	1.07	0.94	0.93	0.80	-0.45**	(2.50)
FF 5-factor alpha	0.31	0.12	-0.06	-0.06	-0.13	-0.44***	(3.51)
HXZ 4-factor alpha	0.50	0.29	0.10	0.12	0.03	-0.47***	(3.67)
Panel F: J=3, K=15							
EW	1.11	1.09	0.96	0.98	0.83	-0.28**	(2.31)
VW	1.17	1.15	0.94	0.97	0.84	-0.33**	(2.01)
FF 5-factor alpha	0.26	0.18	-0.06	-0.03	-0.08	-0.34***	(3.00)
HXZ 4-factor alpha	0.44	0.34	0.10	0.16	0.08	-0.36***	(3.09)

Table 5

Returns of AIUR Portfolios: J=12

This table reports the monthly excess returns or abnormal returns (in percentage) of quintile portfolios sorted on AIUR, which is constructed as the J-month moving average of residuals from 5-year rolling-window regressions of the logarithm of all-in-undrawn spread on a set of loan spread determinants. Every month, firms which borrowed loans over the past J months are sorted into quintile portfolios based on the AIUR measure and held for K months. The average monthly equally weighted excess returns (EW), the average monthly weighted excess returns with the facility amount scaled by total assets as the weight (VW), abnormal returns (alpha) from Fama and French (2015) five-factor model and Hou et al. (2015) four-factor model are presented in each panel for different values of K. The sample period is from January 1994 to December 2016. *t*-statistics for the return spread between the highest and lowest AIUR quintile portfolios are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

	AIUR						
	L	2	3	4	H	H-L	*t*--stat
Panel A: J=12, K=1							
EW	1.37	1.09	1.14	0.99	0.92	-0.45**	(2.55)
VW	1.49	1.17	1.04	0.91	0.84	-0.65**	(2.58)
FF 5-factor alpha	0.28	0.00	-0.07	-0.12	-0.24	-0.52***	(3.42)
HXZ 4-factor alpha	0.58	0.25	0.20	0.19	0.05	-0.53***	(3.39)
Panel B: J=12, K=3							
EW	1.17	1.00	1.02	0.90	0.77	-0.40***	(3.01)
VW	1.26	1.03	0.97	0.82	0.68	-0.58***	(3.05)
FF 5-factor alpha	0.36	0.07	0.04	-0.11	-0.13	-0.49***	(3.96)
HXZ 4-factor alpha	0.58	0.22	0.20	0.08	0.05	-0.53***	(4.19)
Panel C: J=12, K=6							
EW	1.13	1.04	0.99	0.95	0.81	-0.33***	(2.60)
VW	1.21	1.15	0.91	0.91	0.71	-0.50***	(2.87)
FF 5-factor alpha	0.34	0.10	0.04	-0.06	-0.09	-0.43***	(3.64)
HXZ 4-factor alpha	0.54	0.27	0.21	0.12	0.08	-0.45***	(3.75)
Panel D: J=12, K=9							
EW	1.10	1.05	0.96	0.95	0.80	-0.30**	(2.41)
VW	1.18	1.16	0.90	0.92	0.73	-0.45***	(2.63)
FF 5-factor alpha	0.29	0.13	-0.00	-0.05	-0.10	-0.39***	(3.35)
HXZ 4-factor alpha	0.47	0.29	0.18	0.14	0.08	-0.39***	(3.30)
Panel E: J=12, K=12							
EW	1.06	1.05	0.94	0.93	0.79	-0.27**	(2.16)
VW	1.11	1.14	0.87	0.90	0.75	-0.37**	(2.14)
FF 5-factor alpha	0.25	0.14	-0.04	-0.07	-0.13	-0.37***	(3.22)
HXZ 4-factor alpha	0.42	0.30	0.15	0.13	0.06	-0.36***	(3.04)
Panel F: J=12, K=15							
EW	1.03	1.06	0.93	0.91	0.77	-0.25**	(2.02)
VW	1.06	1.14	0.87	0.89	0.78	-0.28*	(1.66)
FF 5-factor alpha	0.21	0.15	-0.05	-0.06	-0.15	-0.36***	(3.21)
HXZ 4-factor alpha	0.37	0.30	0.14	0.14	0.04	-0.34***	(2.93)

Table 6

Fama-MacBeth Return Regressions: J=9

This table shows results from Fama-MacBeth regressions of firm's K-month average excess returns (in percentage) on the measure AIUR as well as controls for expected returns. The values of K are 1, 3, 6, 9, 12, and 15. AIUR is constructed as the J-month moving average of residuals from 5-year rolling-window regressions of the logarithm of all-in-undrawn spread on a set of loan spread determinants. The control variables include reversal (R01), momentum (R12), book-to-market ratio (BM), market leverage (ML), firm size (SZ), Amihud (2002) illiquidity (ILLIQ), idiosyncratic volatility (IDVOL), analyst forecast dispersion (DISP), asset growth (AG), unrated indicator (UNRATED), and speculative-grade indicator (SPECULATIVE). The detailed definitions are provided in Table 0. The sample period is from January 1994 to December 2016. *t*-statistics (based on Newey-West standard errors) are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A

	1-month					3-month					6-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.50***		-0.39***		-0.34***	-0.45***		-0.37***		-0.33***	-0.29***		-0.23***		-0.21***
	(3.88)		(3.67)		(3.24)	(3.91)		(3.99)		(3.87)	(3.13)		(2.87)		(2.89)
R01		-0.02**	-0.02**	-0.02**	-0.02**		-0.01	-0.01	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00
		(2.32)	(2.31)	(2.29)	(2.25)		(1.03)	(0.98)	(0.93)	(0.86)		(0.33)	(0.28)	(0.20)	(0.13)
R12		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00		-0.00	-0.00	0.00	0.00
		(0.57)	(0.59)	(0.98)	(1.01)		(0.35)	(0.35)	(0.92)	(0.91)		(0.03)	(0.04)	(0.36)	(0.37)
BM		0.23**	0.23**	0.24**	0.24**		0.16*	0.16*	0.16*	0.16*		0.06	0.06	0.03	0.03
		(2.02)	(1.99)	(2.08)	(2.07)		(1.70)	(1.72)	(1.66)	(1.70)		(0.77)	(0.79)	(0.38)	(0.44)
ML		-0.19	-0.07	0.21	0.33		-0.19	-0.08	0.01	0.12		-0.04	0.03	0.01	0.08
		(0.44)	(0.16)	(0.52)	(0.82)		(0.52)	(0.22)	(0.02)	(0.35)		(0.15)	(0.08)	(0.02)	(0.28)
SZ		-0.02	-0.03	-0.02	-0.03		-0.03	-0.04	-0.05	-0.06		-0.05	-0.06	-0.07	-0.08*
		(0.29)	(0.50)	(0.36)	(0.55)		(0.59)	(0.78)	(0.96)	(1.15)		(1.29)	(1.53)	(1.64)	(1.87)
ILLIQ				4.31	3.06				-3.50	-3.75				0.94	0.80
				(0.84)	(0.73)				(1.10)	(1.12)				(1.00)	(0.86)
IDVOL				-0.12	-0.11				-0.08	-0.08				-0.04	-0.04
				(1.07)	(1.01)				(0.95)	(0.94)				(0.58)	(0.57)
DISP				-0.11*	-0.10*				-0.07*	-0.07				-0.04	-0.03
				(1.85)	(1.82)				(1.76)	(1.64)				(1.31)	(1.13)
AG				-0.49***	-0.48***				-0.55***	-0.54***				-0.66***	-0.65***
				(2.70)	(2.65)				(3.50)	(3.46)				(5.81)	(5.78)
UNRATED				0.11	0.10				-0.03	-0.04				-0.16*	-0.16*
				(0.81)	(0.79)				(0.29)	(0.34)				(1.74)	(1.74)
SPECULATIVE				-0.16	-0.18				-0.15	-0.17				-0.17*	-0.18*
				(0.93)	(1.02)				(1.10)	(1.27)				(1.75)	(1.86)
Intercept	0.94**	0.58	0.73	0.89	0.99	0.93***	0.88	0.98	1.45	1.55*	0.94***	1.24*	1.35*	1.74**	1.85***
	(2.46)	(0.53)	(0.67)	(0.90)	(1.01)	(2.72)	(0.95)	(1.07)	(1.62)	(1.76)	(3.39)	(1.77)	(1.94)	(2.43)	(2.59)
Adj. R^2	0.15%	6.66%	6.70%	9.76%	9.79%	0.23%	6.79%	6.86%	10.03%	10.06%	0.22%	6.43%	6.52%	10.00%	10.02%
Obs	86,056	86,056	86,056	86,056	86,056	85,222	85,222	85,222	85,222	85,222	83,696	83,696	83,696	83,696	83,696

Panel B

	9-month					12-month					15-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.20***		-0.15**		-0.14**	-0.14*		-0.14**		-0.14**	-0.14**		-0.16***		-0.17***
	(2.60)		(2.34)		(2.30)	(1.96)		(2.47)		(2.58)	(1.97)		(3.06)		(3.32)
R01		0.00	0.00	0.00	0.00		0.00*	0.00*	0.00*	0.00*		0.00	0.00	0.00	0.00
		(0.80)	(0.86)	(0.86)	(0.93)		(1.71)	(1.75)	(1.75)	(1.79)		(1.21)	(1.25)	(1.29)	(1.34)
R12		-0.00	-0.00	0.00	0.00		-0.00	-0.00	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00
		(0.45)	(0.43)	(0.01)	(0.03)		(0.91)	(0.90)	(0.48)	(0.47)		(1.22)	(1.23)	(0.80)	(0.81)
BM		0.02	0.03	-0.02	-0.01		0.02	0.02	-0.02	-0.02		0.07	0.07	0.02	0.03
		(0.37)	(0.40)	(0.27)	(0.20)		(0.37)	(0.39)	(0.31)	(0.28)		(1.18)	(1.18)	(0.46)	(0.49)
ML		0.10	0.15	0.11	0.15		0.17	0.21	0.16	0.20		0.18	0.23	0.18	0.23
		(0.38)	(0.54)	(0.43)	(0.60)		(0.73)	(0.91)	(0.74)	(0.91)		(0.90)	(1.15)	(0.98)	(1.24)
SZ		-0.07**	-0.08**	-0.08**	-0.09***		-0.09***	-0.09***	-0.09***	-0.10***		-0.09***	-0.09***	-0.10***	-0.10***
		(2.03)	(2.24)	(2.56)	(2.80)		(2.64)	(2.83)	(3.20)	(3.42)		(2.96)	(3.20)	(3.38)	(3.64)
ILLIQ				0.72	0.58				0.20	0.09				-0.29	-0.42
				(0.84)	(0.69)				(0.38)	(0.17)				(0.58)	(0.78)
IDVOL				0.01	0.01				0.03	0.03				0.05	0.05
				(0.21)	(0.23)				(0.59)	(0.67)				(1.00)	(1.09)
DISP				-0.00	0.00				0.02	0.02				0.02	0.02
				(0.15)	(0.03)				(0.72)	(0.81)				(0.96)	(1.07)
AG				-0.69***	-0.69***				-0.66***	-0.66***				-0.61***	-0.61***
				(7.24)	(7.21)				(8.12)	(8.15)				(8.16)	(8.20)
UNRATED				-0.24***	-0.25***				-0.27***	-0.29***				-0.23***	-0.26***
				(2.96)	(3.09)				(3.64)	(3.93)				(4.11)	(4.47)
SPECULATIVE				-0.23***	-0.24***				-0.23***	-0.25***				-0.26***	-0.29***
				(2.84)	(3.01)				(3.56)	(3.88)				(4.54)	(4.98)
Intercept	0.95***	1.56***	1.65***	1.96***	2.06***	0.95***	1.79***	1.85***	2.12***	2.20***	0.93***	1.83***	1.88***	2.10***	2.18***
	(4.22)	(2.67)	(2.82)	(3.40)	(3.57)	(4.91)	(3.39)	(3.54)	(4.12)	(4.30)	(5.48)	(3.75)	(3.95)	(4.31)	(4.52)
Adj. R^2	0.20%	6.94%	7.03%	10.51%	10.57%	0.31%	7.16%	7.25%	10.64%	10.69%	0.43%	6.99%	7.13%	10.44%	10.55%
Obs	81,965	81,965	81,965	81,965	81,965	80,145	80,145	80,145	80,145	80,145	78,239	78,239	78,239	78,239	78,239

Table 7

Fama-MacBeth Return Regressions: J=6

This table shows results from Fama-MacBeth regressions of firm's K-month average excess returns (in percentage) on the measure AIUR as well as controls for expected returns. The values of K are 1, 3, 6, 9, 12, and 15. AIUR is constructed as the J-month moving average of residuals from 5-year rolling-window regressions of the logarithm of all-in-undrawn spread on a set of loan spread determinants. The control variables include reversal (R01), momentum (R12), book-to-market ratio (BM), market leverage (ML), firm size (SZ), Amihud (2002) illiquidity (ILLIQ), idiosyncratic volatility (IDVOL), analyst forecast dispersion (DISP), asset growth (AG), unrated indicator (UNRATED), and speculative-grade indicator (SPECULATIVE). The detailed definitions are provided in Table 0. The sample period is from January 1994 to December 2016. *t*-statistics (based on Newey-West standard errors) are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A

	1-month					3-month					6-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.46***		-0.41***		-0.39***	-0.37***		-0.33***		-0.28**	-0.32***		-0.29***		-0.25***
	(2.94)		(3.00)		(2.97)	(2.79)		(2.93)		(2.52)	(3.23)		(3.24)		(2.97)
R01		-0.02**	-0.02**	-0.02**	-0.02**		-0.01	-0.01	-0.01	-0.01		-0.00	-0.00	-0.00	-0.00
		(2.48)	(2.43)	(2.44)	(2.34)		(1.18)	(1.11)	(1.19)	(1.08)		(0.23)	(0.19)	(0.13)	(0.05)
R12		0.00	0.00	0.00	0.00		-0.00	-0.00	0.00	0.00		-0.00	-0.00	-0.00	-0.00
		(0.08)	(0.16)	(0.34)	(0.40)		(0.06)	(0.04)	(0.40)	(0.42)		(0.48)	(0.48)	(0.23)	(0.22)
BM		0.15	0.16	0.19	0.20		0.09	0.09	0.10	0.10		0.05	0.05	0.02	0.03
		(1.05)	(1.11)	(1.41)	(1.46)		(0.83)	(0.84)	(0.92)	(0.92)		(0.64)	(0.62)	(0.27)	(0.31)
ML		-0.41	-0.29	-0.05	0.08		-0.29	-0.18	-0.01	0.11		-0.21	-0.12	-0.05	0.03
		(0.92)	(0.65)	(0.12)	(0.18)		(0.83)	(0.51)	(0.04)	(0.29)		(0.70)	(0.39)	(0.19)	(0.12)
SZ		0.01	-0.01	-0.05	-0.06		-0.01	-0.02	-0.04	-0.05		-0.03	-0.04	-0.04	-0.05
		(0.10)	(0.13)	(0.64)	(0.79)		(0.16)	(0.37)	(0.61)	(0.81)		(0.69)	(0.94)	(0.86)	(1.08)
ILLIQ				-6.64	-7.94				-4.62	-5.27*				-3.42	-3.69
				(0.69)	(0.80)				(1.64)	(1.71)				(0.84)	(0.87)
IDVOL				-0.23**	-0.22**				-0.12	-0.12				-0.05	-0.05
				(2.09)	(1.98)				(1.30)	(1.30)				(0.68)	(0.68)
DISP				-0.06	-0.06				-0.09	-0.09				-0.07	-0.06
				(0.67)	(0.61)				(1.14)	(1.08)				(1.19)	(1.08)
AG				-0.51**	-0.48**				-0.47***	-0.45***				-0.70***	-0.69***
				(2.56)	(2.43)				(2.71)	(2.60)				(5.33)	(5.34)
UNRATED				0.08	0.06				0.04	0.04				-0.08	-0.08
				(0.49)	(0.36)				(0.37)	(0.37)				(0.93)	(0.86)
SPECULATIVE				-0.09	-0.13				-0.06	-0.08				-0.11	-0.12
				(0.46)	(0.63)				(0.41)	(0.48)				(0.94)	(0.97)
Intercept	0.91**	0.22	0.42	1.58	1.69	0.92***	0.54	0.68	1.30	1.43	0.93***	0.91	1.03	1.38*	1.48*
	(2.33)	(0.18)	(0.33)	(1.22)	(1.30)	(2.60)	(0.52)	(0.67)	(1.25)	(1.40)	(3.28)	(1.26)	(1.44)	(1.74)	(1.90)
Adj. R^2	0.17%	6.84%	6.91%	10.63%	10.71%	0.28%	7.15%	7.23%	10.90%	10.94%	0.18%	6.80%	6.87%	11.17%	11.20%
Obs	58,786	58,786	58,786	58,786	58,786	58,290	58,290	58,290	58,290	58,290	57,322	57,322	57,322	57,322	57,322

Panel B

	9-month					12-month					15-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.22**		-0.19**		-0.17**	-0.14*		-0.14**		-0.14**	-0.13		-0.17***		-0.17***
	(2.54)		(2.33)		(2.20)	(1.90)		(2.30)		(2.24)	(1.63)		(2.92)		(2.98)
R01		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
		(0.57)	(0.61)	(0.47)	(0.53)		(1.31)	(1.36)	(1.18)	(1.23)		(1.13)	(1.18)	(0.97)	(1.03)
R12		-0.00	-0.00	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00		-0.00	-0.00*	-0.00	-0.00
		(0.72)	(0.71)	(0.39)	(0.37)		(1.31)	(1.30)	(1.05)	(1.02)		(1.65)	(1.67)	(1.42)	(1.43)
BM		0.02	0.02	-0.02	-0.02		-0.02	-0.02	-0.07	-0.06		0.04	0.04	-0.01	-0.01
		(0.26)	(0.25)	(0.28)	(0.22)		(0.27)	(0.26)	(0.98)	(0.92)		(0.66)	(0.64)	(0.16)	(0.13)
ML		-0.05	0.00	-0.00	0.05		0.13	0.17	0.15	0.18		0.21	0.25	0.18	0.22
		(0.18)	(0.01)	(0.00)	(0.18)		(0.54)	(0.68)	(0.61)	(0.72)		(1.01)	(1.23)	(0.91)	(1.09)
SZ		-0.05	-0.06*	-0.06*	-0.07**		-0.07**	-0.08**	-0.08**	-0.08***		-0.08***	-0.09***	-0.08***	-0.09***
		(1.35)	(1.67)	(1.68)	(2.00)		(2.10)	(2.36)	(2.47)	(2.73)		(2.61)	(2.83)	(2.62)	(2.90)
ILLIQ				1.41	1.17				1.04	0.83				0.64	0.35
				(0.85)	(0.75)				(0.95)	(0.80)				(1.21)	(0.60)
IDVOL				-0.02	-0.02				0.01	0.02				0.05	0.05
				(0.35)	(0.34)				(0.27)	(0.33)				(1.11)	(1.18)
DISP				-0.05	-0.05				-0.01	-0.01				-0.01	-0.00
				(1.39)	(1.26)				(0.31)	(0.23)				(0.18)	(0.08)
AG				-0.77***	-0.77***				-0.71***	-0.71***				-0.65***	-0.65***
				(6.84)	(6.90)				(7.17)	(7.21)				(7.43)	(7.47)
UNRATED				-0.18**	-0.18**				-0.25***	-0.27***				-0.24***	-0.26***
				(1.98)	(2.00)				(2.76)	(2.97)				(3.31)	(3.65)
SPECULATIVE				-0.18*	-0.19*				-0.21***	-0.23***				-0.24***	-0.27***
				(1.90)	(1.95)				(2.98)	(3.13)				(3.74)	(4.13)
Intercept	0.94***	1.22**	1.34**	1.68***	1.81***	0.95***	1.57***	1.66***	1.91***	2.02***	0.95***	1.74***	1.80***	1.93***	2.04***
	(4.07)	(2.10)	(2.35)	(2.80)	(3.03)	(4.80)	(2.92)	(3.13)	(3.57)	(3.79)	(5.41)	(3.43)	(3.62)	(3.62)	(3.86)
Adj. R^2	0.21%	7.22%	7.37%	11.53%	11.65%	0.22%	7.58%	7.64%	11.70%	11.78%	0.36%	7.62%	7.70%	11.72%	11.80%
Obs	56,183	56,183	56,183	56,183	56,183	54,974	54,974	54,974	54,974	54,974	53,707	53,707	53,707	53,707	53,707

Table 8

Fama-MacBeth Return Regressions: J=3

This table shows results from Fama-MacBeth regressions of firm's K-month average excess returns (in percentage) on the measure AIUR as well as controls for expected returns. The values of K are 1, 3, 6, 9, 12, and 15. AIUR is constructed as the J-month moving average of residuals from 5-year rolling-window regressions of the logarithm of all-in-undrawn spread on a set of loan spread determinants. The control variables include reversal (R01), momentum (R12), book-to-market ratio (BM), market leverage (ML), firm size (SZ), Amihud (2002) illiquidity (ILLIQ), idiosyncratic volatility (IDVOL), analyst forecast dispersion (DISP), asset growth (AG), unrated indicator (UNRATED), and speculative-grade indicator (SPECULATIVE). The detailed definitions are provided in Table 0. The sample period is from January 1994 to December 2016. *t*-statistics (based on Newey-West standard errors) are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A

	1-month					3-month					6-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.50***		-0.46**		-0.40**	-0.59***		-0.63***		-0.58***	-0.37***		-0.33***		-0.28**
	(2.77)		(2.52)		(2.44)	(3.89)		(4.38)		(3.90)	(3.49)		(3.08)		(2.36)
R01		-0.02**	-0.02*	-0.02**	-0.02*		-0.01	-0.01	-0.01	-0.01		-0.00	-0.00	-0.00	-0.00
		(2.20)	(1.96)	(2.04)	(1.81)		(0.81)	(0.73)	(1.08)	(1.00)		(0.15)	(0.16)	(0.59)	(0.63)
R12		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00		-0.00	-0.00	-0.00	-0.00
		(0.66)	(0.84)	(0.20)	(0.60)		(0.35)	(0.45)	(0.40)	(0.56)		(0.41)	(0.42)	(0.40)	(0.38)
BM		0.28	0.28	0.10	0.11		0.21	0.21	0.12	0.12		0.10	0.09	-0.01	-0.01
		(1.60)	(1.65)	(0.56)	(0.60)		(1.46)	(1.49)	(0.82)	(0.84)		(0.89)	(0.88)	(0.06)	(0.08)
ML		-0.34	-0.19	-0.09	0.11		-0.45	-0.22	-0.43	-0.15		-0.28	-0.16	-0.22	-0.10
		(0.54)	(0.29)	(0.13)	(0.15)		(0.97)	(0.44)	(0.93)	(0.32)		(0.88)	(0.46)	(0.72)	(0.30)
SZ		0.03	-0.00	0.01	0.01		0.01	-0.00	-0.03	-0.06		-0.01	-0.02	-0.03	-0.04
		(0.32)	(0.00)	(0.13)	(0.08)		(0.21)	(0.01)	(0.43)	(0.79)		(0.25)	(0.33)	(0.53)	(0.69)
ILLIQ				14.33	10.96				1.50	-0.99				1.55	1.56
				(1.03)	(0.83)				(0.18)	(0.12)				(0.25)	(0.25)
IDVOL				-0.13	-0.10				-0.13	-0.12				-0.06	-0.06
				(1.00)	(0.77)				(1.20)	(1.10)				(0.64)	(0.64)
DISP				0.01	0.05				-0.05	-0.02				-0.07	-0.04
				(0.03)	(0.20)				(0.34)	(0.09)				(0.51)	(0.27)
AG				-0.59*	-0.59*				-0.69***	-0.62**				-0.80***	-0.80***
				(1.82)	(1.77)				(2.90)	(2.58)				(4.12)	(4.06)
UNRATED				0.03	0.05				-0.06	-0.07				-0.10	-0.10
				(0.12)	(0.18)				(0.34)	(0.34)				(0.79)	(0.75)
SPECULATIVE				-0.23	-0.28				-0.08	-0.13				-0.08	-0.10
				(0.83)	(1.03)				(0.39)	(0.65)				(0.59)	(0.66)
Intercept	0.89**	-0.15	0.13	0.56	0.52	0.90**	0.16	0.31	1.38	1.65	0.91***	0.60	0.62	1.26	1.34
	(2.32)	(0.11)	(0.10)	(0.34)	(0.32)	(2.48)	(0.15)	(0.29)	(1.07)	(1.30)	(3.12)	(0.76)	(0.79)	(1.34)	(1.43)
Adj. R^2	0.06%	7.45%	7.49%	12.64%	12.58%	0.23%	8.72%	8.93%	13.73%	13.89%	0.14%	7.61%	7.69%	13.74%	13.87%
Obs	29,891	29,891	29,891	29,891	29,891	29,683	29,683	29,683	29,683	29,683	29,267	29,267	29,267	29,267	29,267

Panel B

	9-month					12-month					15-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.39***		-0.35***		-0.31***	-0.22***		-0.21***		-0.18**	-0.19**		-0.24***		-0.23***
	(3.96)		(3.52)		(3.10)	(2.60)		(2.70)		(2.18)	(2.46)		(3.91)		(3.57)
R01		0.00	0.00	0.00	0.00		0.01*	0.01*	0.00	0.00		0.00*	0.00*	0.00	0.00
		(0.72)	(0.69)	(0.26)	(0.23)		(1.91)	(1.95)	(1.27)	(1.31)		(1.67)	(1.68)	(0.91)	(0.95)
R12		-0.00	-0.00	-0.00	0.00		-0.00	-0.00	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00
		(0.45)	(0.45)	(0.02)	(0.01)		(0.97)	(0.98)	(0.65)	(0.60)		(1.59)	(1.63)	(1.24)	(1.24)
BM		0.10	0.09	0.02	0.02		0.04	0.04	-0.03	-0.03		0.06	0.05	-0.03	-0.04
		(1.15)	(1.09)	(0.17)	(0.15)		(0.57)	(0.53)	(0.31)	(0.28)		(0.76)	(0.69)	(0.40)	(0.43)
ML		-0.22	-0.13	-0.29	-0.18		-0.06	-0.01	-0.08	-0.02		0.10	0.17	0.01	0.08
		(0.75)	(0.42)	(1.00)	(0.60)		(0.20)	(0.03)	(0.28)	(0.06)		(0.44)	(0.71)	(0.06)	(0.35)
SZ		-0.02	-0.02	-0.03	-0.04		-0.04	-0.05	-0.04	-0.05		-0.07**	-0.08**	-0.06*	-0.07**
		(0.47)	(0.66)	(0.63)	(1.04)		(1.12)	(1.40)	(1.18)	(1.61)		(2.09)	(2.33)	(1.70)	(2.20)
ILLIQ				2.70	2.15				6.20**	5.96*				5.41**	5.09**
				(0.61)	(0.48)				(2.01)	(1.95)				(2.27)	(2.29)
IDVOL				-0.02	-0.02				-0.01	-0.00				0.06	0.07
				(0.31)	(0.29)				(0.10)	(0.00)				(1.11)	(1.14)
DISP				0.00	0.04				-0.06	-0.04				0.00	0.02
				(0.03)	(0.32)				(0.93)	(0.67)				(0.06)	(0.33)
AG				-0.91***	-0.92***				-0.82***	-0.83***				-0.74***	-0.74***
				(5.58)	(5.62)				(6.17)	(6.19)				(6.11)	(6.00)
UNRATED				-0.20*	-0.20*				-0.25**	-0.26**				-0.28***	-0.31***
				(1.70)	(1.68)				(2.10)	(2.18)				(2.84)	(3.17)
SPECULATIVE				-0.15	-0.17				-0.19*	-0.20**				-0.24***	-0.27***
				(1.23)	(1.36)				(1.92)	(1.99)				(3.12)	(3.47)
Intercept	0.92***	0.78	0.86	1.25*	1.46**	0.93***	1.12**	1.24**	1.41**	1.57***	0.96***	1.59***	1.68***	1.56***	1.77***
	(3.88)	(1.22)	(1.36)	(1.75)	(2.06)	(4.59)	(1.98)	(2.20)	(2.44)	(2.72)	(5.26)	(2.92)	(3.12)	(2.77)	(3.19)
Adj. R^2	0.22%	7.97%	8.20%	14.14%	14.39%	0.15%	8.45%	8.53%	14.62%	14.86%	0.09%	8.87%	8.79%	14.73%	14.73%
Obs	28,703	28,703	28,703	28,703	28,703	28,113	28,113	28,113	28,113	28,113	27,483	27,483	27,483	27,483	27,483

Table 9

Fama-MacBeth Return Regressions: J=12

This table shows results from Fama-MacBeth regressions of firm's K-month average excess returns (in percentage) on the measure AIUR as well as controls for expected returns. The values of K are 1, 3, 6, 9, 12, and 15. AIUR is constructed as the J-month moving average of residuals from 5-year rolling-window regressions of the logarithm of all-in-undrawn spread on a set of loan spread determinants. The control variables include reversal (R01), momentum (R12), book-to-market ratio (BM), market leverage (ML), firm size (SZ), Amihud (2002) illiquidity (ILLIQ), idiosyncratic volatility (IDVOL), analyst forecast dispersion (DISP), asset growth (AG), unrated indicator (UNRATED), and speculative-grade indicator (SPECULATIVE). The detailed definitions are provided in Table 0. The sample period is from January 1994 to December 2016. *t*-statistics (based on Newey-West standard errors) are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A

	1-month					3-month					6-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.40***		-0.32***		-0.30***	-0.34***		-0.28***		-0.26***	-0.22***		-0.19***		-0.19***
	(3.27)		(3.18)		(3.12)	(3.14)		(3.26)		(3.26)	(2.61)		(2.73)		(2.81)
R01		-0.01**	-0.01**	-0.01**	-0.01**		-0.00	-0.00	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00
		(1.99)	(1.98)	(2.07)	(2.04)		(0.62)	(0.57)	(0.74)	(0.66)		(0.28)	(0.22)	(0.22)	(0.13)
R12		0.00	0.00	0.01**	0.01**		0.00	0.00	0.00	0.00*		0.00	0.00	0.00	0.00
		(1.60)	(1.61)	(2.25)	(2.24)		(0.98)	(0.98)	(1.64)	(1.66)		(0.36)	(0.39)	(0.91)	(0.96)
BM		0.27***	0.27***	0.29***	0.29***		0.16**	0.16**	0.16**	0.16**		0.05	0.05	0.02	0.02
		(2.83)	(2.85)	(3.05)	(3.06)		(2.05)	(2.11)	(1.99)	(2.05)		(0.72)	(0.76)	(0.28)	(0.34)
ML		-0.26	-0.16	-0.09	0.01		-0.11	-0.02	-0.05	0.04		0.06	0.13	0.06	0.13
		(0.62)	(0.38)	(0.24)	(0.02)		(0.30)	(0.05)	(0.17)	(0.12)		(0.21)	(0.43)	(0.23)	(0.48)
SZ		-0.04	-0.06	-0.09	-0.10*		-0.06	-0.07	-0.09*	-0.10**		-0.08*	-0.09**	-0.10**	-0.11***
		(0.71)	(0.92)	(1.64)	(1.86)		(1.11)	(1.32)	(1.80)	(2.04)		(1.87)	(2.06)	(2.51)	(2.72)
ILLIQ				0.40	-0.14				-1.63	-1.66				-0.14	-0.23
				(0.16)	(0.07)				(1.52)	(1.52)				(0.21)	(0.33)
IDVOL				-0.14	-0.14				-0.08	-0.07				-0.03	-0.02
				(1.43)	(1.39)				(0.91)	(0.90)				(0.39)	(0.36)
DISP				-0.03	-0.03				-0.04*	-0.04*				-0.00	0.00
				(1.21)	(0.99)				(1.94)	(1.72)				(0.06)	(0.16)
AG				-0.44***	-0.43***				-0.51***	-0.50***				-0.60***	-0.59***
				(3.01)	(2.92)				(3.90)	(3.83)				(6.07)	(6.00)
UNRATED				-0.09	-0.10				-0.13	-0.13				-0.22**	-0.23***
				(0.67)	(0.77)				(1.19)	(1.20)				(2.54)	(2.62)
SPECULATIVE				-0.20	-0.22				-0.15	-0.16				-0.19**	-0.21**
				(1.31)	(1.48)				(1.31)	(1.42)				(2.20)	(2.35)
Intercept	0.93**	1.01	1.16	2.11**	2.25**	0.94***	1.27	1.40	2.02**	2.16**	0.96***	1.62**	1.73**	2.12***	2.25***
	(2.48)	(0.93)	(1.08)	(2.20)	(2.34)	(2.78)	(1.37)	(1.51)	(2.38)	(2.53)	(3.51)	(2.24)	(2.38)	(3.18)	(3.32)
Adj. R^2	0.14%	6.06%	6.11%	8.75%	8.79%	0.19%	6.38%	6.43%	9.13%	9.15%	0.18%	6.52%	6.59%	9.63%	9.68%
Obs	111,217	111,217	111,217	111,217	111,217	110,032	110,032	110,032	110,032	110,032	107,960	107,960	107,960	107,960	107,960

Panel B

	9-month					12-month					15-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.16**		-0.14**		-0.14**	-0.14*		-0.14***		-0.15***	-0.12*		-0.15***		-0.16***
	(2.12)		(2.45)		(2.53)	(1.91)		(2.81)		(3.13)	(1.71)		(3.09)		(3.47)
R01		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
		(0.47)	(0.52)	(0.46)	(0.53)		(1.44)	(1.48)	(1.41)	(1.45)		(0.92)	(0.96)	(1.00)	(1.04)
R12		0.00	0.00	0.00	0.00		-0.00	-0.00	0.00	0.00		-0.00	-0.00	-0.00	-0.00
		(0.00)	(0.03)	(0.51)	(0.56)		(0.43)	(0.40)	(0.08)	(0.12)		(0.72)	(0.71)	(0.09)	(0.07)
BM		0.04	0.04	0.00	0.00		0.04	0.04	0.01	0.01		0.06	0.06	0.03	0.03
		(0.68)	(0.72)	(0.03)	(0.06)		(0.71)	(0.73)	(0.21)	(0.23)		(1.09)	(1.09)	(0.67)	(0.67)
ML		0.12	0.17	0.10	0.15		0.14	0.19	0.11	0.16		0.14	0.19	0.11	0.17
		(0.46)	(0.65)	(0.41)	(0.62)		(0.63)	(0.85)	(0.53)	(0.77)		(0.72)	(0.99)	(0.64)	(0.94)
SZ		-0.09**	-0.10***	-0.11***	-0.11***		-0.09***	-0.10***	-0.10***	-0.11***		-0.10***	-0.10***	-0.10***	-0.11***
		(2.48)	(2.66)	(3.22)	(3.40)		(2.88)	(3.07)	(3.49)	(3.68)		(3.34)	(3.56)	(3.66)	(3.85)
ILLIQ				-0.01	-0.08				-0.16	-0.22				0.08	0.03
				(0.02)	(0.14)				(0.40)	(0.52)				(0.31)	(0.12)
IDVOL				0.00	0.00				0.02	0.02				0.04	0.04
				(0.01)	(0.06)				(0.35)	(0.43)				(0.76)	(0.86)
DISP				0.01	0.01				0.02	0.02				0.02	0.02
				(0.48)	(0.66)				(0.97)	(1.13)				(1.11)	(1.32)
AG				-0.66***	-0.66***				-0.63***	-0.63***				-0.60***	-0.60***
				(7.76)	(7.73)				(8.32)	(8.29)				(8.45)	(8.44)
UNRATED				-0.27***	-0.27***				-0.26***	-0.27***				-0.21***	-0.23***
				(3.53)	(3.73)				(3.72)	(3.98)				(3.99)	(4.24)
SPECULATIVE				-0.22***	-0.24***				-0.23***	-0.25***				-0.22***	-0.24***
				(2.96)	(3.18)				(3.60)	(3.91)				(4.23)	(4.60)
Intercept	0.96***	1.82***	1.89***	2.29***	2.39***	0.93***	1.90***	1.95***	2.24***	2.30***	0.92***	1.98***	2.02***	2.18***	2.23***
	(4.26)	(3.03)	(3.16)	(3.99)	(4.12)	(4.88)	(3.57)	(3.72)	(4.36)	(4.50)	(5.51)	(4.13)	(4.30)	(4.57)	(4.71)
Adj. R^2	0.23%	6.98%	7.06%	10.02%	10.08%	0.34%	7.01%	7.10%	10.24%	10.30%	0.40%	6.79%	6.89%	10.13%	10.20%
Obs	105,641	105,641	105,641	105,641	105,641	103,211	103,211	103,211	103,211	103,211	100,767	100,767	100,767	100,767	100,767

Table 10

Panel Regressions: J=9

This table shows results from panel regressions of firm's K-month average excess returns (in percentage) on the measure AIUR as well as controls for expected returns. The values of K are 1, 3, 6, 9, 12, and 15. AIUR is constructed as the J-month moving average of residuals from 5-year rolling-window regressions of the logarithm of all-in-undrawn spread on a set of loan spread determinants. The control variables include reversal (R01), momentum (R12), book-to-market ratio (BM), market leverage (ML), firm size (SZ), Amihud (2002) illiquidity (ILLIQ), idiosyncratic volatility (IDVOL), analyst forecast dispersion (DISP), asset growth (AG), unrated indicator (UNRATED), and speculative-grade indicator (SPECULATIVE). The detailed definitions are provided in Table 0. The sample period is from January 1994 to December 2016. *t*-statistics (based on standard errors clustered by firm and month) are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A

	1-month					3-month					6-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.44***		-0.60***		-0.61***	-0.36***		-0.53***		-0.52***	-0.22**		-0.40***		-0.39***
	(3.60)		(4.43)		(4.47)	(3.07)		(4.21)		(4.19)	(2.11)		(3.56)		(3.46)
R01		0.01	0.01	0.01	0.01		-0.00	0.00	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00
		(0.65)	(0.66)	(0.62)	(0.64)		(0.01)	(0.00)	(0.09)	(0.07)		(0.42)	(0.41)	(0.59)	(0.57)
R12		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
		(1.13)	(1.15)	(1.28)	(1.31)		(1.08)	(1.12)	(1.34)	(1.38)		(1.22)	(1.26)	(1.55)	(1.60)
BM		0.46**	0.46**	0.44**	0.44**		0.41***	0.41***	0.38***	0.38***		0.40***	0.40***	0.35***	0.35***
		(2.51)	(2.52)	(2.43)	(2.44)		(3.35)	(3.37)	(3.20)	(3.21)		(3.38)	(3.39)	(3.13)	(3.14)
ML		0.51	0.72	0.55	0.77		0.55	0.73*	0.52	0.72*		0.62*	0.75**	0.45	0.60*
		(0.97)	(1.33)	(1.04)	(1.43)		(1.42)	(1.83)	(1.30)	(1.74)		(1.86)	(2.22)	(1.31)	(1.68)
SZ		-0.01	-0.03	-0.03	-0.05		-0.04	-0.05	-0.03	-0.05		-0.05	-0.06	-0.04	-0.05
		(0.14)	(0.29)	(0.35)	(0.53)		(0.65)	(0.84)	(0.44)	(0.64)		(1.31)	(1.52)	(0.72)	(0.91)
ILLIQ				-0.01	-0.01				0.00	-0.00				0.02*	0.01*
				(0.41)	(0.49)				(0.11)	(0.05)				(1.78)	(1.67)
IDVOL				0.07	0.07				0.14	0.13				0.18*	0.18*
				(0.31)	(0.30)				(1.00)	(0.99)				(1.71)	(1.70)
DISP				0.00	0.00				0.00	0.00				-0.00	-0.00
				(0.72)	(0.71)				(1.45)	(1.45)				(0.31)	(0.34)
AG				-0.30	-0.29				-0.30*	-0.29*				-0.31*	-0.30*
				(1.63)	(1.62)				(1.77)	(1.77)				(1.73)	(1.73)
UNRATED				-0.28	-0.29				-0.31*	-0.32*				-0.40**	-0.41***
				(1.28)	(1.34)				(1.77)	(1.84)				(2.56)	(2.62)
SPECULATIVE				-0.38	-0.41				-0.37**	-0.40**				-0.34**	-0.36**
				(1.47)	(1.59)				(2.01)	(2.15)				(2.21)	(2.34)
Intercept	0.80**	0.48	0.60	0.89	1.08	0.81***	0.89	0.99	0.81	0.97	0.80***	1.09*	1.18*	0.91	1.04
	(2.53)	(0.35)	(0.43)	(0.53)	(0.65)	(4.04)	(0.96)	(1.07)	(0.65)	(0.78)	(5.60)	(1.70)	(1.83)	(0.90)	(1.03)
Adj. R^2	0.02%	0.16%	0.19%	0.19%	0.22%	0.03%	0.36%	0.43%	0.51%	0.57%	0.03%	0.64%	0.72%	1.03%	1.11%
Obs	86,056	86,056	86,056	86,056	86,056	85,222	85,222	85,222	85,222	85,222	83,696	83,696	83,696	83,696	83,696

Panel B

	9-month					12-month					15-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.17*		-0.36***		-0.35***	-0.12		-0.32***		-0.31***	-0.09		-0.31***		-0.29***
	(1.71)		(3.51)		(3.40)	(1.27)		(3.37)		(3.26)	(1.07)		(3.36)		(3.27)
R01		0.00	0.00	-0.00	-0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
		(0.20)	(0.22)	(0.04)	(0.01)		(0.65)	(0.68)	(0.37)	(0.40)		(0.40)	(0.43)	(0.02)	(0.05)
R12		0.00	0.00	0.00	0.00		-0.00	0.00	0.00	0.00		-0.00	-0.00	-0.00	-0.00
		(0.73)	(0.78)	(1.12)	(1.17)		(0.01)	(0.03)	(0.41)	(0.46)		(0.78)	(0.73)	(0.28)	(0.23)
BM		0.42***	0.42***	0.36***	0.36***		0.38***	0.38***	0.32***	0.32***		0.35***	0.35***	0.29***	0.29***
		(3.57)	(3.58)	(3.26)	(3.26)		(3.48)	(3.50)	(3.11)	(3.12)		(3.68)	(3.70)	(3.26)	(3.27)
ML		0.62**	0.75**	0.46	0.59*		0.68**	0.79***	0.57**	0.69**		0.73***	0.83***	0.67**	0.78***
		(2.05)	(2.41)	(1.46)	(1.84)		(2.45)	(2.80)	(1.98)	(2.35)		(2.88)	(3.25)	(2.53)	(2.90)
SZ		-0.08**	-0.09***	-0.08	-0.09*		-0.11***	-0.12***	-0.09**	-0.10**		-0.12***	-0.12***	-0.08**	-0.09**
		(2.44)	(2.66)	(1.48)	(1.67)		(3.33)	(3.53)	(1.97)	(2.16)		(3.96)	(4.17)	(1.99)	(2.19)
ILLIQ				0.01	0.01				0.01	0.01				0.01	0.01
				(1.26)	(1.18)				(1.01)	(0.92)				(1.11)	(0.99)
IDVOL				0.20**	0.19**				0.22***	0.21***				0.24***	0.24***
				(2.20)	(2.19)				(2.87)	(2.85)				(3.66)	(3.65)
DISP				-0.00	-0.00				-0.00	-0.00				-0.00	-0.00
				(1.48)	(1.56)				(1.57)	(1.63)				(1.41)	(1.46)
AG				-0.34*	-0.33*				-0.31*	-0.31*				-0.28*	-0.28*
				(1.93)	(1.93)				(1.92)	(1.93)				(1.91)	(1.91)
UNRATED				-0.43***	-0.44***				-0.41***	-0.42***				-0.38***	-0.38***
				(3.19)	(3.26)				(3.36)	(3.42)				(3.31)	(3.37)
SPECULATIVE				-0.38***	-0.40***				-0.42***	-0.43***				-0.44***	-0.45***
				(2.94)	(3.07)				(3.27)	(3.39)				(3.58)	(3.69)
Intercept	0.79***	1.54***	1.61***	1.40	1.52*	0.79***	1.90***	1.97***	1.57**	1.68**	0.80***	2.05***	2.11***	1.37**	1.47**
	(6.69)	(2.79)	(2.93)	(1.55)	(1.68)	(7.35)	(3.71)	(3.85)	(1.99)	(2.12)	(8.16)	(4.49)	(4.64)	(1.98)	(2.12)
Adj. R^2	0.02%	1.05%	1.15%	1.73%	1.82%	0.01%	1.41%	1.52%	2.31%	2.40%	0.01%	1.82%	1.93%	2.99%	3.10%
Obs	81,965	81,965	81,965	81,965	81,965	80,145	80,145	80,145	80,145	80,145	78,239	78,239	78,239	78,239	78,239

Table 11

Panel Regressions: J=6

This table shows results from panel regressions of firm's K-month average excess returns (in percentage) on the measure AIUR as well as controls for expected returns. The values of K are 1, 3, 6, 9, 12, and 15. AIUR is constructed as the J-month moving average of residuals from 5-year rolling-window regressions of the logarithm of all-in-undrawn spread on a set of loan spread determinants. The control variables include reversal (R01), momentum (R12), book-to-market ratio (BM), market leverage (ML), firm size (SZ), Amihud (2002) illiquidity (ILLIQ), idiosyncratic volatility (IDVOL), analyst forecast dispersion (DISP), asset growth (AG), unrated indicator (UNRATED), and speculative-grade indicator (SPECULATIVE). The detailed definitions are provided in Table 0. The sample period is from January 1994 to December 2016. *t*-statistics (based on standard errors clustered by firm and month) are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A

	1-month					3-month					6-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.40***		-0.55***		-0.56***	-0.31**		-0.46***		-0.46***	-0.24**		-0.41***		-0.39***
	(2.73)		(3.57)		(3.63)	(2.29)		(3.24)		(3.27)	(2.02)		(3.20)		(3.12)
R01		0.01	0.01	0.01	0.01		-0.00	-0.00	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00
		(0.31)	(0.32)	(0.31)	(0.31)		(0.20)	(0.20)	(0.24)	(0.24)		(0.36)	(0.35)	(0.47)	(0.46)
R12		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
		(0.58)	(0.60)	(0.67)	(0.70)		(0.59)	(0.62)	(0.75)	(0.79)		(0.77)	(0.81)	(1.03)	(1.07)
BM		0.41**	0.41**	0.40**	0.40**		0.37***	0.37***	0.35***	0.35***		0.38***	0.38***	0.34***	0.34***
		(2.36)	(2.37)	(2.30)	(2.31)		(2.66)	(2.67)	(2.58)	(2.58)		(3.17)	(3.18)	(2.91)	(2.92)
ML		0.55	0.73	0.55	0.76		0.57	0.72*	0.62	0.79*		0.68*	0.82**	0.60	0.75*
		(0.98)	(1.29)	(0.94)	(1.27)		(1.35)	(1.69)	(1.37)	(1.71)		(1.86)	(2.18)	(1.55)	(1.88)
SZ		-0.00	-0.01	-0.05	-0.07		-0.02	-0.03	-0.02	-0.04		-0.02	-0.03	-0.02	-0.03
		(0.03)	(0.16)	(0.56)	(0.73)		(0.26)	(0.43)	(0.30)	(0.50)		(0.58)	(0.80)	(0.28)	(0.50)
ILLIQ				-0.02	-0.03				-0.03	-0.03				0.02	0.02
				(0.70)	(0.81)				(0.91)	(0.99)				(0.81)	(0.68)
IDVOL				0.00	0.00				0.08	0.08				0.14	0.13
				(0.02)	(0.01)				(0.58)	(0.57)				(1.23)	(1.21)
DISP				0.00	0.00				0.00	0.00				0.00	0.00
				(1.20)	(1.20)				(1.20)	(1.19)				(0.23)	(0.22)
AG				-0.26	-0.26				-0.23	-0.22				-0.26	-0.25
				(1.42)	(1.41)				(1.46)	(1.45)				(1.43)	(1.43)
UNRATED				-0.27	-0.29				-0.19	-0.20				-0.30*	-0.31**
				(1.12)	(1.17)				(1.07)	(1.13)				(1.90)	(1.96)
SPECULATIVE				-0.30	-0.34				-0.31	-0.34				-0.32*	-0.35**
				(1.05)	(1.15)				(1.51)	(1.63)				(1.92)	(2.05)
Intercept	0.79**	0.38	0.50	1.33	1.54	0.80***	0.62	0.73	0.72	0.89	0.81***	0.72	0.82	0.60	0.75
	(2.42)	(0.26)	(0.34)	(0.80)	(0.92)	(3.90)	(0.63)	(0.73)	(0.58)	(0.72)	(5.69)	(1.07)	(1.20)	(0.60)	(0.75)
Adj. R^2	0.01%	0.11%	0.13%	0.14%	0.16%	0.02%	0.28%	0.33%	0.37%	0.43%	0.03%	0.55%	0.63%	0.83%	0.91%
Obs	58,786	58,786	58,786	58,786	58,786	58,290	58,290	58,290	58,290	58,290	57,322	57,322	57,322	57,322	57,322

Panel B

	9-month					12-month					15-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.16		-0.34***		-0.32***	-0.11		-0.31***		-0.30***	-0.08		-0.30***		-0.29***
	(1.49)		(3.02)		(2.88)	(1.10)		(3.08)		(2.95)	(0.94)		(3.21)		(3.10)
R01		0.00	0.00	-0.00	-0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
		(0.05)	(0.06)	(0.15)	(0.13)		(0.41)	(0.42)	(0.17)	(0.19)		(0.51)	(0.53)	(0.18)	(0.20)
R12		0.00	0.00	0.00	0.00		-0.00	-0.00	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00
		(0.33)	(0.37)	(0.63)	(0.68)		(0.42)	(0.38)	(0.07)	(0.03)		(0.89)	(0.85)	(0.45)	(0.40)
BM		0.39***	0.39***	0.34***	0.34***		0.33***	0.33***	0.28***	0.28***		0.33***	0.33***	0.27***	0.27***
		(3.30)	(3.31)	(2.98)	(2.99)		(3.00)	(3.01)	(2.59)	(2.60)		(3.25)	(3.27)	(2.77)	(2.78)
ML		0.70**	0.81**	0.55	0.67*		0.83***	0.94***	0.72**	0.83***		0.86***	0.97***	0.81***	0.92***
		(2.11)	(2.40)	(1.58)	(1.89)		(2.81)	(3.11)	(2.32)	(2.63)		(3.21)	(3.54)	(2.89)	(3.22)
SZ		-0.05	-0.06*	-0.05	-0.06		-0.09***	-0.10***	-0.07	-0.08*		-0.11***	-0.12***	-0.07*	-0.08**
		(1.52)	(1.73)	(0.90)	(1.09)		(2.79)	(3.00)	(1.57)	(1.78)		(3.67)	(3.87)	(1.76)	(1.97)
ILLIQ				0.03	0.02				0.02	0.02				0.02	0.02
				(1.20)	(1.05)				(0.99)	(0.88)				(0.82)	(0.71)
IDVOL				0.17*	0.16*				0.20**	0.20**				0.24***	0.24***
				(1.84)	(1.82)				(2.53)	(2.52)				(3.34)	(3.33)
DISP				-0.00	-0.00				-0.00	-0.00				-0.00	-0.00
				(0.75)	(0.78)				(1.30)	(1.34)				(1.36)	(1.40)
AG				-0.28	-0.28				-0.26	-0.26				-0.23	-0.23
				(1.63)	(1.64)				(1.63)	(1.63)				(1.62)	(1.63)
UNRATED				-0.37***	-0.38***				-0.37***	-0.38***				-0.36***	-0.36***
				(2.66)	(2.72)				(3.00)	(3.07)				(3.04)	(3.11)
SPECULATIVE				-0.34**	-0.36***				-0.38***	-0.40***				-0.44***	-0.46***
				(2.47)	(2.61)				(3.00)	(3.12)				(3.41)	(3.52)
Intercept	0.80***	1.12**	1.20**	0.99	1.11	0.78***	1.67***	1.74***	1.29*	1.40*	0.79***	1.99***	2.06***	1.25*	1.36*
	(6.99)	(1.98)	(2.11)	(1.12)	(1.25)	(7.51)	(3.19)	(3.33)	(1.65)	(1.79)	(8.00)	(4.16)	(4.31)	(1.74)	(1.90)
Adj. R^2	0.02%	0.89%	0.97%	1.45%	1.53%	0.01%	1.27%	1.36%	2.06%	2.15%	0.01%	1.77%	1.89%	2.88%	2.98%
Obs	56,183	56,183	56,183	56,183	56,183	54,974	54,974	54,974	54,974	54,974	53,707	53,707	53,707	53,707	53,707

Table 12

Panel Regressions: J=3

This table shows results from panel regressions of firm's K-month average excess returns (in percentage) on the measure AIUR as well as controls for expected returns. The values of K are 1, 3, 6, 9, 12, and 15. AIUR is constructed as the J-month moving average of residuals from 5-year rolling-window regressions of the logarithm of all-in-undrawn spread on a set of loan spread determinants. The control variables include reversal (R01), momentum (R12), book-to-market ratio (BM), market leverage (ML), firm size (SZ), Amihud (2002) illiquidity (ILLIQ), idiosyncratic volatility (IDVOL), analyst forecast dispersion (DISP), asset growth (AG), unrated indicator (UNRATED), and speculative-grade indicator (SPECULATIVE). The detailed definitions are provided in Table 0. The sample period is from January 1994 to December 2016. *t*-statistics (based on standard errors clustered by firm and month) are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A

	1-month					3-month					6-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.48***		-0.67***		-0.65***	-0.54***		-0.70***		-0.70***	-0.33**		-0.47***		-0.46***
	(2.69)		(3.72)		(3.69)	(3.33)		(4.06)		(4.06)	(2.55)		(3.49)		(3.38)
R01		0.01	0.01	0.01	0.01		-0.00	0.00	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00
		(0.35)	(0.36)	(0.35)	(0.36)		(0.01)	(0.01)	(0.03)	(0.01)		(0.23)	(0.22)	(0.30)	(0.28)
R12		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
		(1.20)	(1.23)	(1.31)	(1.34)		(0.67)	(0.72)	(0.84)	(0.90)		(0.57)	(0.62)	(0.77)	(0.82)
BM		0.53**	0.53**	0.51**	0.51**		0.49***	0.49***	0.47**	0.47**		0.36***	0.36***	0.32**	0.32**
		(2.38)	(2.39)	(2.22)	(2.23)		(2.61)	(2.61)	(2.50)	(2.50)		(2.70)	(2.70)	(2.51)	(2.52)
ML		0.65	0.87	0.76	1.00		0.34	0.57	0.35	0.61		0.59	0.75*	0.53	0.70
		(0.97)	(1.29)	(1.06)	(1.40)		(0.67)	(1.12)	(0.64)	(1.12)		(1.54)	(1.91)	(1.25)	(1.62)
SZ		-0.03	-0.05	-0.06	-0.08		-0.03	-0.05	-0.04	-0.07		-0.01	-0.02	-0.01	-0.03
		(0.35)	(0.49)	(0.53)	(0.72)		(0.49)	(0.72)	(0.52)	(0.80)		(0.23)	(0.48)	(0.18)	(0.44)
ILLIQ				0.13*	0.12*				0.02	0.01				0.04	0.03
				(1.94)	(1.87)				(0.48)	(0.30)				(1.24)	(1.10)
IDVOL				-0.04	-0.04				0.08	0.07				0.09	0.08
				(0.15)	(0.17)				(0.54)	(0.50)				(0.79)	(0.76)
DISP				0.00***	0.00***				0.00***	0.00***				0.00	0.00
				(13.32)	(13.36)				(24.03)	(23.84)				(1.03)	(0.97)
AG				-0.16	-0.16				-0.14	-0.14				-0.15	-0.14
				(1.09)	(1.09)				(1.10)	(1.10)				(0.99)	(0.98)
UNRATED				-0.18	-0.19				-0.27	-0.29				-0.26	-0.27
				(0.59)	(0.64)				(1.26)	(1.33)				(1.56)	(1.62)
SPECULATIVE				-0.33	-0.38				-0.37	-0.42*				-0.29	-0.32
				(1.02)	(1.15)				(1.50)	(1.68)				(1.49)	(1.64)
Intercept	0.73**	0.63	0.78	1.16	1.42	0.75***	0.78	0.95	1.00	1.28	0.78***	0.54	0.66	0.59	0.78
	(2.22)	(0.40)	(0.49)	(0.64)	(0.78)	(3.54)	(0.71)	(0.85)	(0.70)	(0.90)	(5.46)	(0.74)	(0.90)	(0.58)	(0.76)
Adj. R^2	0.02%	0.21%	0.25%	0.27%	0.31%	0.08%	0.47%	0.60%	0.55%	0.68%	0.06%	0.44%	0.55%	0.59%	0.70%
Obs	29,891	29,891	29,891	29,891	29,891	29,683	29,683	29,683	29,683	29,683	29,267	29,267	29,267	29,267	29,267

Panel B

	9-month					12-month					15-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.28**		-0.44***		-0.43***	-0.14		-0.33***		-0.31***	-0.13		-0.34***		-0.33***
	(2.51)		(3.72)		(3.59)	(1.40)		(3.13)		(2.99)	(1.39)		(3.57)		(3.43)
R01		0.00	0.00	0.00	0.00		0.00	0.01	0.00	0.00		0.00	0.00	0.00	0.00
		(0.23)	(0.25)	(0.08)	(0.11)		(0.99)	(1.01)	(0.77)	(0.80)		(1.07)	(1.10)	(0.76)	(0.79)
R12		0.00	0.00	0.00	0.00		-0.00	-0.00	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00
		(0.60)	(0.65)	(0.85)	(0.91)		(0.36)	(0.32)	(0.09)	(0.04)		(1.03)	(0.98)	(0.66)	(0.59)
BM		0.42***	0.42***	0.37***	0.37***		0.31**	0.31**	0.26**	0.26**		0.29**	0.29**	0.23**	0.23**
		(3.06)	(3.08)	(2.82)	(2.84)		(2.42)	(2.43)	(2.14)	(2.14)		(2.51)	(2.52)	(2.12)	(2.12)
ML		0.62*	0.77**	0.51	0.67*		0.87***	0.98***	0.72**	0.84**		0.92***	1.03***	0.86***	0.98***
		(1.78)	(2.16)	(1.37)	(1.77)		(2.64)	(2.94)	(2.08)	(2.40)		(3.12)	(3.46)	(2.74)	(3.09)
SZ		-0.03	-0.04	-0.03	-0.04		-0.07**	-0.08**	-0.05	-0.06		-0.11***	-0.12***	-0.07	-0.08*
		(0.84)	(1.12)	(0.52)	(0.80)		(2.00)	(2.23)	(1.14)	(1.36)		(3.53)	(3.78)	(1.58)	(1.83)
ILLIQ				0.03	0.03				0.02	0.01				0.01	0.01
				(1.44)	(1.25)				(0.78)	(0.65)				(0.54)	(0.42)
IDVOL				0.14	0.14				0.19**	0.18**				0.25***	0.25***
				(1.54)	(1.51)				(2.31)	(2.28)				(3.28)	(3.25)
DISP				0.00***	0.00***				-0.00***	-0.00***				-0.00***	-0.00***
				(3.53)	(3.47)				(7.50)	(7.59)				(6.07)	(6.16)
AG				-0.19	-0.19				-0.17	-0.17				-0.16	-0.16
				(1.23)	(1.24)				(1.26)	(1.26)				(1.26)	(1.26)
UNRATED				-0.36**	-0.37***				-0.37***	-0.38***				-0.36***	-0.37***
				(2.55)	(2.62)				(2.89)	(2.95)				(3.03)	(3.10)
SPECULATIVE				-0.38**	-0.40***				-0.36***	-0.38***				-0.46***	-0.48***
				(2.53)	(2.71)				(2.79)	(2.94)				(3.53)	(3.67)
Intercept	0.79***	0.79	0.90	0.75	0.93	0.78***	1.34**	1.42***	1.03	1.16	0.79***	1.95***	2.03***	1.12	1.26*
	(6.97)	(1.33)	(1.51)	(0.82)	(1.01)	(7.77)	(2.43)	(2.59)	(1.29)	(1.45)	(8.05)	(3.96)	(4.14)	(1.53)	(1.72)
Adj. R^2	0.06%	0.83%	0.98%	1.27%	1.41%	0.02%	1.09%	1.20%	1.73%	1.83%	0.02%	1.69%	1.84%	2.79%	2.92%
Obs	28,703	28,703	28,703	28,703	28,703	28,113	28,113	28,113	28,113	28,113	27,483	27,483	27,483	27,483	27,483

Table 13

Panel Regressions: J=12

This table shows results from panel regressions of firm's K-month average excess returns (in percentage) on the measure AIUR as well as controls for expected returns. The values of K are 1, 3, 6, 9, 12, and 15. AIUR is constructed as the J-month moving average of residuals from 5-year rolling-window regressions of the logarithm of all-in-undrawn spread on a set of loan spread determinants. The control variables include reversal (R01), momentum (R12), book-to-market ratio (BM), market leverage (ML), firm size (SZ), Amihud (2002) illiquidity (ILLIQ), idiosyncratic volatility (IDVOL), analyst forecast dispersion (DISP), asset growth (AG), unrated indicator (UNRATED), and speculative-grade indicator (SPECULATIVE). The detailed definitions are provided in Table 0. The sample period is from January 1994 to December 2016. *t*-statistics (based on standard errors clustered by firm and month) are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A

	1-month					3-month					6-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.33***		-0.49***		-0.49***	-0.28***		-0.47***		-0.46***	-0.20**		-0.41***		-0.39***
	(2.78)		(3.84)		(3.85)	(2.64)		(4.18)		(4.12)	(2.11)		(3.95)		(3.84)
R01		0.01	0.01	0.01	0.01		0.00	0.00	0.00	0.00		-0.00	-0.00	-0.00	-0.00
		(0.80)	(0.81)	(0.79)	(0.80)		(0.16)	(0.17)	(0.08)	(0.10)		(0.39)	(0.37)	(0.58)	(0.56)
R12		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00*
		(1.06)	(1.09)	(1.20)	(1.23)		(1.10)	(1.14)	(1.36)	(1.40)		(1.26)	(1.31)	(1.61)	(1.66)
BM		0.42**	0.42**	0.40**	0.41**		0.41***	0.41***	0.38***	0.38***		0.40***	0.41***	0.36***	0.36***
		(2.36)	(2.38)	(2.31)	(2.32)		(3.25)	(3.27)	(3.15)	(3.17)		(3.16)	(3.17)	(2.96)	(2.97)
ML		0.42	0.58	0.35	0.53		0.52	0.68*	0.40	0.57		0.62**	0.76**	0.45	0.60*
		(0.85)	(1.16)	(0.72)	(1.06)		(1.41)	(1.80)	(1.06)	(1.47)		(2.00)	(2.38)	(1.40)	(1.81)
SZ		-0.04	-0.05	-0.11	-0.12		-0.07	-0.08	-0.08	-0.09		-0.09**	-0.10**	-0.08	-0.09
		(0.51)	(0.62)	(1.13)	(1.26)		(1.25)	(1.42)	(1.12)	(1.29)		(2.30)	(2.50)	(1.35)	(1.52)
ILLIQ				0.00	0.00				0.01	0.01				0.01**	0.01**
				(0.14)	(0.06)				(0.95)	(0.81)				(2.16)	(2.03)
IDVOL				0.02	0.02				0.13	0.13				0.20*	0.20*
				(0.09)	(0.08)				(0.92)	(0.90)				(1.85)	(1.84)
DISP				0.00	0.00				0.00	0.00				-0.00	-0.00
				(0.76)	(0.75)				(0.91)	(0.88)				(1.25)	(1.34)
AG				-0.30*	-0.30*				-0.32**	-0.32**				-0.34**	-0.34**
				(1.77)	(1.76)				(2.01)	(2.00)				(1.98)	(1.98)
UNRATED				-0.42*	-0.43*				-0.38**	-0.39**				-0.44***	-0.45***
				(1.88)	(1.92)				(2.33)	(2.39)				(2.92)	(2.98)
SPECULATIVE				-0.38	-0.41*				-0.35**	-0.37**				-0.38***	-0.40***
				(1.57)	(1.66)				(2.06)	(2.19)				(2.59)	(2.71)
Intercept	0.79**	0.95	1.04	2.15	2.29	0.80***	1.35	1.43	1.56	1.69	0.80***	1.62***	1.69***	1.45	1.57
	(2.47)	(0.71)	(0.77)	(1.31)	(1.39)	(3.84)	(1.48)	(1.57)	(1.23)	(1.34)	(5.31)	(2.58)	(2.70)	(1.40)	(1.51)
Adj. R^2	0.01%	0.14%	0.16%	0.17%	0.19%	0.02%	0.38%	0.43%	0.52%	0.57%	0.02%	0.74%	0.82%	1.17%	1.25%
Obs	111,217	111,217	111,217	111,217	111,217	110,032	110,032	110,032	110,032	110,032	107,960	107,960	107,960	107,960	107,960

Panel B

	9-month					12-month					15-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.15*		-0.36***		-0.35***	-0.11		-0.32***		-0.31***	-0.07		-0.28***		-0.27***
	(1.66)		(3.71)		(3.59)	(1.22)		(3.44)		(3.33)	(0.82)		(3.24)		(3.14)
R01		-0.00	0.00	-0.00	-0.00		0.00	0.00	0.00	0.00		0.00	0.00	-0.00	-0.00
		(0.01)	(0.01)	(0.27)	(0.25)		(0.38)	(0.40)	(0.06)	(0.09)		(0.05)	(0.07)	(0.40)	(0.37)
R12		0.00	0.00	0.00	0.00		-0.00	-0.00	0.00	0.00		-0.00	-0.00	-0.00	-0.00
		(0.77)	(0.82)	(1.14)	(1.20)		(0.13)	(0.07)	(0.28)	(0.33)		(0.96)	(0.91)	(0.50)	(0.43)
BM		0.42***	0.42***	0.37***	0.37***		0.39***	0.39***	0.33***	0.34***		0.37***	0.37***	0.31***	0.31***
		(3.50)	(3.52)	(3.25)	(3.26)		(3.58)	(3.60)	(3.27)	(3.29)		(3.70)	(3.71)	(3.33)	(3.34)
ML		0.57**	0.69**	0.43	0.56*		0.61**	0.72***	0.53*	0.64**		0.68***	0.78***	0.61**	0.71***
		(1.98)	(2.36)	(1.43)	(1.83)		(2.33)	(2.70)	(1.90)	(2.28)		(2.83)	(3.18)	(2.41)	(2.77)
SZ		-0.11***	-0.12***	-0.10*	-0.11**		-0.12***	-0.12***	-0.10**	-0.10**		-0.12***	-0.13***	-0.08**	-0.09**
		(3.12)	(3.32)	(1.87)	(2.03)		(3.68)	(3.87)	(2.07)	(2.24)		(4.27)	(4.46)	(2.04)	(2.21)
ILLIQ				0.01	0.01				0.01	0.00				0.00	0.00
				(1.39)	(1.27)				(0.95)	(0.82)				(0.73)	(0.58)
IDVOL				0.20**	0.20**				0.22***	0.22***				0.25***	0.25***
				(2.32)	(2.31)				(3.03)	(3.02)				(3.88)	(3.87)
DISP				-0.00**	-0.00**				-0.00*	-0.00*				-0.00	-0.00
				(2.08)	(2.19)				(1.76)	(1.84)				(1.36)	(1.41)
AG				-0.37**	-0.37**				-0.35**	-0.35**				-0.33**	-0.32**
				(2.18)	(2.18)				(2.17)	(2.18)				(2.15)	(2.15)
UNRATED				-0.45***	-0.46***				-0.40***	-0.41***				-0.36***	-0.37***
				(3.36)	(3.42)				(3.35)	(3.40)				(3.31)	(3.36)
SPECULATIVE				-0.41***	-0.43***				-0.42***	-0.43***				-0.41***	-0.42***
				(3.16)	(3.28)				(3.41)	(3.52)				(3.50)	(3.60)
Intercept	0.80***	1.88***	1.94***	1.75*	1.85**	0.79***	2.02***	2.08***	1.64**	1.73**	0.81***	2.12***	2.17***	1.38**	1.46**
	(6.40)	(3.45)	(3.58)	(1.89)	(2.00)	(7.29)	(4.10)	(4.23)	(2.08)	(2.20)	(8.32)	(4.85)	(4.98)	(2.02)	(2.14)
Adj. R^2	0.02%	1.15%	1.24%	1.85%	1.94%	0.01%	1.48%	1.57%	2.41%	2.50%	0.00%	1.93%	2.02%	3.15%	3.24%
Obs	105,641	105,641	105,641	105,641	105,641	103,211	103,211	103,211	103,211	103,211	100,767	100,767	100,767	100,767	100,767

Table 14

Returns of Double-Sort Portfolios

This table reports the performance of portfolios sorted on proxies of information asymmetry and AIUR. Each month, we split firms that borrowed loans over the past 9 months by the median of analyst coverage (total number of analysts following the firm in the fiscal year), analyst forecast error (the absolute difference between the actual earnings and the mean forecast by all analysts, scaled by the absolute value of actual earnings), or institutional ownership (percentage of shares owned by institutions). And then firms in each group are sorted into quintile portfolios based on AIUR and held for K months. The panels present the average monthly return spread (in percentage) between the highest and lowest AIUR quintile portfolios for different values of K, using the equally weighted excess returns (EW), the weighted excess returns with the facility amount scaled by total assets as the weight (VW), alphas from Fama and French (2015) five-factor model and Hou et al. (2015) four-factor model. t-statistics are reported in parentheses. The sample period spans from 1994 to 2016. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

	Analyst Coverage		Analyst Forecast Error		Institutional Ownership	
	Low	High	Low	High	Low	High
Panel A: J=9, K=1						
EW	-0.88***	0.05	-0.17	-0.52*	-1.00***	0.26
	(2.79)	(0.19)	(0.80)	(1.71)	(3.70)	(1.21)
VW	-0.59	0.12	-0.27	-0.70*	-0.91**	0.13
	(1.48)	(0.42)	(0.90)	(1.69)	(2.25)	(0.43)
FF 5-factor alpha	-0.77**	0.12	0.15	-0.51*	-1.06***	0.38
	(2.43)	(0.48)	(0.65)	(1.68)	(4.01)	(1.63)
HXZ 4-factor alpha	-0.97***	0.13	0.02	-0.52*	-1.13***	0.27
	(3.09)	(0.55)	(0.09)	(1.67)	(4.21)	(1.16)
Panel B: J=9, K=3						
EW	-0.79***	-0.02	-0.16	-0.44**	-0.89***	0.12
	(3.51)	(0.12)	(1.00)	(1.99)	(4.17)	(0.70)
VW	-0.87***	0.14	-0.16	-0.74**	-0.97***	0.08
	(2.97)	(0.66)	(0.72)	(2.30)	(3.24)	(0.34)
FF 5-factor alpha	-0.81***	0.01	0.06	-0.60***	-0.90***	0.20
	(3.86)	(0.04)	(0.35)	(2.65)	(4.53)	(1.14)
HXZ 4-factor alpha	-0.98***	0.00	-0.03	-0.69***	-1.01***	0.07
	(4.62)	(0.02)	(0.17)	(3.01)	(5.01)	(0.39)
Panel C: J=9, K=6						
EW	-0.60***	-0.05	-0.08	-0.36*	-0.64***	0.10
	(2.78)	(0.26)	(0.52)	(1.81)	(3.20)	(0.59)
VW	-0.70***	0.01	-0.07	-0.65**	-0.70***	0.02
	(2.60)	(0.07)	(0.38)	(2.33)	(2.60)	(0.10)
FF 5-factor alpha	-0.78***	-0.05	0.08	-0.65***	-0.79***	0.12
	(4.12)	(0.28)	(0.54)	(3.18)	(4.24)	(0.72)
HXZ 4-factor alpha	-0.91***	-0.05	0.05	-0.73***	-0.89***	0.06
	(4.73)	(0.30)	(0.30)	(3.53)	(4.70)	(0.33)
Panel D: J=9, K=9						
EW	-0.48**	-0.08	-0.00	-0.42**	-0.49***	0.02
	(2.49)	(0.43)	(0.01)	(2.36)	(2.77)	(0.10)
VW	-0.60**	-0.06	-0.00	-0.71***	-0.59**	-0.07
	(2.42)	(0.30)	(0.03)	(2.92)	(2.44)	(0.37)
FF 5-factor alpha	-0.68***	-0.09	0.13	-0.72***	-0.67***	0.02
	(4.18)	(0.55)	(0.92)	(3.99)	(4.08)	(0.12)
HXZ 4-factor alpha	-0.77***	-0.08	0.12	-0.78***	-0.75***	0.00
	(4.53)	(0.46)	(0.91)	(4.20)	(4.43)	(0.02)
Panel E: J=9, K=12						
EW	-0.37**	-0.06	0.04	-0.36**	-0.37**	-0.01
	(2.14)	(0.34)	(0.33)	(2.14)	(2.24)	(0.04)
VW	-0.51**	-0.00	0.08	-0.66***	-0.43*	-0.06
	(2.28)	(0.00)	(0.45)	(2.91)	(1.91)	(0.32)
FF 5-factor alpha	-0.52***	-0.09	0.16	-0.63***	-0.52***	-0.00
	(3.36)	(0.58)	(1.22)	(3.72)	(3.47)	(0.02)
HXZ 4-factor alpha	-0.58***	-0.05	0.19	-0.69***	-0.56***	-0.01
	(3.68)	(0.31)	(1.47)	(3.91)	(3.66)	(0.06)
Panel F: J=9, K=15						
EW	-0.35**	-0.10	0.03	-0.36**	-0.34**	-0.02
	(2.17)	(0.63)	(0.23)	(2.18)	(2.19)	(0.13)
VW	-0.48**	0.02	0.11	-0.60***	-0.34	-0.04
	(2.35)	(0.13)	(0.67)	(2.77)	(1.58)	(0.23)
FF 5-factor alpha	-0.43***	-0.13	0.14	-0.58***	-0.47***	-0.03
	(2.93)	(0.87)	(1.12)	(3.63)	(3.28)	(0.20)
HXZ 4-factor alpha	-0.49***	-0.07	0.18	-0.63***	-0.48***	-0.03
	(3.23)	(0.47)	(1.48)	(3.79)	(3.33)	(0.19)

Table 15

AIUR and Operating Performance

This table reports the coefficients from regressions where measures of operating performance are regressed on the AIUR measure and control variables. AIUR is constructed as the 9-month moving average of residuals from 5-year rolling-window regressions of the logarithm of all-in-undrawn spread on a set of loan spread determinants. The control variables include the lagged dependent variable (Lagged Y), reversal (R01),momentum (R12), book-to-market ratio (BM), market leverage (ML), firm size (SZ), Amihud (2002) illiquidity (ILLIQ), idiosyncratic volatility (IDVOL), analyst forecast dispersion (DISP), asset growth (AG), unrated indicator (UNRATED), speculative-grade indicator (SPECULATIVE), ratio of R&D expenses to sales (R&D), firm age (AGE), log of total assets (ASSETS), and log of sales (SALES). The detailed definitions are provided in Table 0. In columns (1), (2), and (3), the dependent variable is cash flow (CF), defined as earnings before interest, taxes, depreciation and amortization (Compustat item OIBDP) scaled by total assets (Compustat item AT). In columns (4), (5), and (6), the dependent variable is return on assets (ROA), defined as net income (Compustat item NI) divided by total assets. The dependent variables are calculated in year $t+1$, where year t denotes the year when AIUR is calculated. The dependent variables are measured in percentage and adjusted by subtracting the industry median in a given Fama and French 48 industry and year. Year-month fixed effect and industry fixed effect are included but the coefficients on these dummies are omitted for brevity. The sample period is from January 1994 to December 2016. t-statistics (based on standard errors clustered by year-month) are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Y	Industry-adjusted CF			Industry-adjusted ROA		
	(1)	(2)	(3)	(4)	(5)	(6)
AIUR	-3.06***	-0.98***	-0.61***	-3.06***	-1.47***	-0.75***
	(26.06)	(11.14)	(7.94)	(24.01)	(12.89)	(7.66)
Lagged Y		0.63***	0.56***		0.45***	0.36***
		(61.82)	(49.21)		(28.32)	(23.53)
R01			1.69***			2.29***
			(4.70)			(4.12)
R12			0.02			0.70***
			(0.20)			(3.64)
BM			0.15***			0.04
			(2.95)			(0.57)
ML			8.75***			3.50***
			(31.42)			(9.07)
SZ			3.70***			2.92***
			(25.75)			(18.28)
ILLIQ			0.01***			-0.00
			(3.18)			(0.29)
IDVOL			-0.20***			-0.61***
			(5.22)			(9.72)
AG			-0.30***			-0.27***
			(2.78)			(2.86)
UNRATED			-0.56***			-0.40***
			(5.43)			(3.37)
SPECULATIVE			-1.01***			-0.75***
			(9.31)			(7.07)
R&D			-0.02***			-0.05***
			(3.37)			(6.39)
AGE			0.04			0.34***
			(0.84)			(5.02)
ASSETS			-5.20***			-3.81***
			(30.46)			(21.72)
SALES			1.50***			1.30***
			(22.04)			(17.78)
Intercept	3.17***	0.29	-25.03***	-4.50***	-4.88***	-26.85***
	(4.32)	(0.62)	(22.44)	(4.51)	(5.87)	(17.75)
Year-month FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R^2	34.83%	63.86%	66.64%	28.12%	42.15%	45.69%
Obs	72,617	72,617	72,617	72,936	72,936	72,936

Table 16
AIUR and Cash Flow Volatility

This table presents the relation between AIUR and future cash flow volatility. AIUR is constructed as the 9-month moving average of residuals from 5-year rolling-window regressions of the logarithm of all-in-undrawn spread on a set of loan spread determinants. The control variables include the lagged dependent variable (Lagged Y), reversal (R01),momentum (R12), book-to-market ratio (BM), market leverage (ML), firm size (SZ), Amihud (2002) illiquidity (ILLIQ), idiosyncratic volatility (IDVOL), analyst forecast dispersion (DISP), asset growth (AG), unrated indicator (UNRATED), speculative-grade indicator (SPECULATIVE), ratio of R&D expenses to sales (R&D), firm age (AGE), log of total assets (ASSETS), and log of sales (SALES). The detailed definitions are provided in Table 0. In columns (1), (2), and (3), the dependent variable is cash flow volatility, defined as the standard deviation of quarterly operating cash flow over the next two years. The operating cash flow is computed as earnings before interest, taxes, depreciation and amortization (Compustat item OIBDPQ) scaled by total assets (Compustat item ATQ) and it is adjusted by subtracting the industry median in a given Fama and French 48 industry and quarter. In columns (4), (5), and (6), the dependent variable is analyst dispersion on cash flow, defined as the standard deviation of analysts' forecasts on cash flow per share times the shares outstanding, scaled by the book value of total assets. The dispersion is calculated based on the one-year-ahead forecast (I/B/E/S item FY1) for the value at the end of year $t+2$, where year t denotes the year when AIUR is calculated. The dependent variables are measured in percentage. Year-month fixed effect and industry fixed effect are included but the coefficients on these dummies are omitted for brevity. The sample period is from January 1994 to December 2016. t-statistics (based on standard errors clustered by year-month) are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Y	Cash Flow Volatility			Analyst Dispersion on Cash Flow		
	(1)	(2)	(3)	(4)	(5)	(6)
AIUR	0.08***	0.06***	0.08***	1.29**	1.26**	1.31***
	(5.36)	(5.48)	(6.00)	(2.49)	(2.50)	(3.38)
Lagged Y		0.42***	0.38***		0.54***	0.53***
		(30.99)	(28.09)		(10.94)	(10.91)
R01			-0.12*			-2.71
			(1.72)			(1.60)
R12			0.02**			-1.55***
			(2.07)			(4.25)
BM			0.04***			0.29
			(5.23)			(1.32)
ML			-0.27***			-2.74**
			(4.73)			(2.53)
SZ			0.10***			0.17
			(7.20)			(0.52)
ILLIQ			-0.00			-0.32***
			(0.26)			(3.52)
IDVOL			0.09***			0.15
			(15.63)			(0.76)
AG			-0.09***			-0.28*
			(7.67)			(1.91)
UNRATED			0.05**			-0.47
			(2.44)			(0.54)
SPECULATIVE			0.07***			-0.01
			(3.27)			(0.01)
R&D			0.44***			1.03***
			(4.23)			(2.73)
AGE			-0.06***			-1.29*
			(6.53)			(1.83)
ASSETS			-0.19***			-0.34
			(8.54)			(1.20)
SALES			0.01			-0.42*
			(0.62)			(1.72)
Intercept	1.46***	0.73***	0.72***	0.95***	1.08***	8.35
	(19.17)	(7.99)	(4.40)	(3.71)	(4.11)	(1.53)
Year-month FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R^2	12.86%	30.18%	32.64%	1.19%	15.19%	16.23%
Obs	66,453	66,453	66,453	20,103	20,103	20,103

Appendix A

The results reported in this appendix are obtained when Equation (1) is estimated in one regression with the full sample. As described in the main paper, after estimating Equation (1), we aggregate the residuals into firm-month level. And AIUR of a firm in a certain month is constructed as the moving average of its residuals over the past J months.

Tables A1 through A4 show the univariate relation between AIUR and future stock returns, with J equal to 9, 6, 3, and 12, respectively. Every month, firms which borrowed loans over the past J months are sorted into quintile portfolios based on the AIUR measure and held for K months. The values of K are 1, 3, 6, 9, 12, and 15. For each K, we report the average monthly equally weighted excess returns (EW), the average monthly weighted excess returns with the facility amount scaled by total assets as the weight (VW), alphas from Fama and French (2015) five-factor model and alphas from Hou et al. (2015) four-factor model.

Tables A5 through A8 present results from Fama-MacBeth regressions of future stock returns on AIUR as well as controls for expected returns, with J equal to 9, 6, 3, and 12, respectively. The dependent variable is firm's K-month average excess returns where K takes the value of 1, 3, 6, 9, 12, and 15. The control variables include the stock return over the previous month (R01), the stock return over the 11 months preceding the previous month (R12), the log of the ratio of book value of equity to market value of equity (BM), the log of the market leverage ratio defined as book value of long-term debt divided by the sum of market value of equity and book value of long-term debt (ML), and the log of the market value of equity (SZ). In addition to Fama-MacBeth regressions, we also estimate these models with panel regressions, and the corresponding results are reported in Tables A9 through A12.

Table A1

Returns of AIUR Portfolios: J=9

This table reports the monthly excess returns or abnormal returns (in percentage) of quintile portfolios sorted on AIUR, which is constructed as the J-month moving average of residuals from regression of the logarithm of all-in-undrawn spread on a set of loan spread determinants where the regression is run with the full sample. Every month, firms which borrowed loans over the past J months are sorted into quintile portfolios based on the AIUR measure and held for K months. The average monthly equally weighted excess returns (EW), the average monthly weighted excess returns with the facility amount scaled by total assets as the weight (VW), abnormal returns (alpha) from Fama and French (2015) five-factor model and Hou et al. (2015) four-factor model are presented in each panel for different values of K. The sample period is from January 1994 to December 2016. *t*-statistics for the return spread between the highest and lowest AIUR quintile portfolios are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

	AIUR						
	L	2	3	4	H	H-L	*t*--stat
Panel A: J=9, K=1							
EW	1.46	1.08	1.17	0.98	0.92	-0.54***	(2.77)
VW	1.51	1.08	1.08	1.02	0.79	-0.71**	(2.48)
FF 5-factor alpha	0.31	-0.08	0.02	-0.13	-0.22	-0.53***	(2.72)
HXZ 4-factor alpha	0.59	0.28	0.28	0.10	0.09	-0.50**	(2.54)
Panel B: J=9, K=3							
EW	1.25	0.98	0.98	0.87	0.71	-0.54***	(3.43)
VW	1.29	1.00	0.89	0.88	0.55	-0.75***	(3.47)
FF 5-factor alpha	0.33	0.01	0.06	-0.07	-0.18	-0.50***	(3.28)
HXZ 4-factor alpha	0.54	0.20	0.22	0.06	-0.02	-0.56***	(3.54)
Panel C: J=9, K=6							
EW	1.18	1.01	0.96	0.91	0.76	-0.42***	(2.87)
VW	1.25	1.08	0.90	0.92	0.63	-0.62***	(3.12)
FF 5-factor alpha	0.34	0.05	0.04	-0.06	-0.14	-0.48***	(3.43)
HXZ 4-factor alpha	0.54	0.23	0.22	0.09	0.02	-0.52***	(3.63)
Panel D: J=9, K=9							
EW	1.14	1.04	0.98	0.93	0.79	-0.34**	(2.57)
VW	1.25	1.11	0.94	0.95	0.66	-0.59***	(3.18)
FF 5-factor alpha	0.31	0.09	0.03	-0.05	-0.11	-0.42***	(3.32)
HXZ 4-factor alpha	0.50	0.26	0.21	0.11	0.07	-0.43***	(3.37)
Panel E: J=9, K=12							
EW	1.06	1.08	0.95	0.95	0.81	-0.25*	(1.86)
VW	1.14	1.15	0.91	0.97	0.71	-0.43**	(2.42)
FF 5-factor alpha	0.23	0.14	0.01	-0.07	-0.10	-0.33***	(2.73)
HXZ 4-factor alpha	0.41	0.30	0.20	0.11	0.09	-0.32***	(2.61)
Panel F: J=9, K=15							
EW	1.01	1.08	0.92	0.93	0.80	-0.21	(1.60)
VW	1.08	1.11	0.89	0.94	0.74	-0.33*	(1.88)
FF 5-factor alpha	0.18	0.14	-0.02	-0.08	-0.11	-0.29**	(2.45)
HXZ 4-factor alpha	0.35	0.30	0.18	0.10	0.08	-0.26**	(2.22)

Table A2

Returns of AIUR Portfolios: J=6

This table reports the monthly excess returns or abnormal returns (in percentage) of quintile portfolios sorted on AIUR, which is constructed as the J-month moving average of residuals from regression of the logarithm of all-in-undrawn spread on a set of loan spread determinants where the regression is run with the full sample. Every month, firms which borrowed loans over the past J months are sorted into quintile portfolios based on the AIUR measure and held for K months. The average monthly equally weighted excess returns (EW), the average monthly weighted excess returns with the facility amount scaled by total assets as the weight (VW), abnormal returns (alpha) from Fama and French (2015) five-factor model and Hou et al. (2015) four-factor model are presented in each panel for different values of K. The sample period is from January 1994 to December 2016. *t*-statistics for the return spread between the highest and lowest AIUR quintile portfolios are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

	AIUR						
	L	2	3	4	H	H-L	*t*--stat
Panel A: J=6, K=1							
EW	1.50	1.14	1.30	0.97	0.94	-0.55**	(2.50)
VW	1.55	1.18	1.18	1.06	0.84	-0.72**	(2.03)
FF 5-factor alpha	0.28	-0.03	0.19	-0.18	-0.23	-0.51**	(2.45)
HXZ 4-factor alpha	0.58	0.33	0.38	0.13	0.14	-0.44**	(2.07)
Panel B: J=6, K=3							
EW	1.17	1.02	1.01	0.94	0.78	-0.39**	(2.14)
VW	1.22	1.09	0.91	0.93	0.70	-0.52**	(2.01)
FF 5-factor alpha	0.20	0.03	0.14	-0.08	-0.14	-0.34*	(1.91)
HXZ 4-factor alpha	0.39	0.23	0.27	0.07	0.06	-0.33*	(1.89)
Panel C: J=6, K=6							
EW	1.18	1.02	1.00	0.91	0.75	-0.42**	(2.58)
VW	1.20	1.10	0.93	0.90	0.68	-0.52**	(2.34)
FF 5-factor alpha	0.27	0.04	0.11	-0.05	-0.14	-0.41**	(2.53)
HXZ 4-factor alpha	0.47	0.25	0.25	0.09	0.01	-0.46***	(2.79)
Panel D: J=6, K=9							
EW	1.16	1.01	0.98	0.93	0.77	-0.39***	(2.82)
VW	1.24	1.08	0.95	0.94	0.68	-0.57***	(2.89)
FF 5-factor alpha	0.30	0.05	0.05	-0.05	-0.14	-0.45***	(3.29)
HXZ 4-factor alpha	0.51	0.24	0.21	0.10	0.03	-0.48***	(3.46)
Panel E: J=6, K=12							
EW	1.10	1.07	0.98	0.95	0.82	-0.27**	(2.12)
VW	1.19	1.16	0.95	0.97	0.72	-0.47**	(2.59)
FF 5-factor alpha	0.27	0.12	0.04	-0.06	-0.10	-0.37***	(3.00)
HXZ 4-factor alpha	0.45	0.29	0.20	0.11	0.09	-0.37***	(2.96)
Panel F: J=6, K=15							
EW	1.04	1.08	0.97	0.95	0.83	-0.21*	(1.67)
VW	1.11	1.14	0.94	0.99	0.76	-0.35**	(2.08)
FF 5-factor alpha	0.20	0.13	0.04	-0.07	-0.08	-0.28**	(2.38)
HXZ 4-factor alpha	0.37	0.29	0.22	0.10	0.10	-0.27**	(2.28)

Table A3

Returns of AIUR Portfolios: J=3

This table reports the monthly excess returns or abnormal returns (in percentage) of quintile portfolios sorted on AIUR, which is constructed as the J-month moving average of residuals from regression of the logarithm of all-in-undrawn spread on a set of loan spread determinants where the regression is run with the full sample. Every month, firms which borrowed loans over the past J months are sorted into quintile portfolios based on the AIUR measure and held for K months. The average monthly equally weighted excess returns (EW), the average monthly weighted excess returns with the facility amount scaled by total assets as the weight (VW), abnormal returns (alpha) from Fama and French (2015) five-factor model and Hou et al. (2015) four-factor model are presented in each panel for different values of K. The sample period is from January 1994 to December 2016. *t*-statistics for the return spread between the highest and lowest AIUR quintile portfolios are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

	AIUR						
	L	2	3	4	H	H-L	*t*--stat
Panel A: J=3, K=1							
EW	1.59	0.77	1.46	0.90	0.77	-0.82***	(3.01)
VW	1.70	0.73	1.48	1.10	0.80	-0.90**	(2.11)
FF 5-factor alpha	0.23	-0.27	0.29	-0.32	-0.42	-0.66**	(2.53)
HXZ 4-factor alpha	0.50	-0.01	0.56	0.09	-0.15	-0.64**	(2.43)
Panel B: J=3 K=3							
EW	1.30	0.88	1.10	0.80	0.74	-0.56***	(2.80)
VW	1.27	0.99	1.10	0.88	0.71	-0.56*	(1.87)
FF 5-factor alpha	0.22	-0.03	0.18	-0.28	-0.22	-0.44**	(2.30)
HXZ 4-factor alpha	0.41	0.06	0.30	-0.03	-0.04	-0.45**	(2.34)
Panel C: J=3, K=6							
EW	1.18	0.98	1.05	0.92	0.79	-0.39**	(2.28)
VW	1.16	1.11	0.97	0.93	0.82	-0.34	(1.45)
FF 5-factor alpha	0.22	0.03	0.14	-0.12	-0.11	-0.34**	(1.99)
HXZ 4-factor alpha	0.40	0.23	0.26	0.07	0.04	-0.37**	(2.15)
Panel D: J=3, K=9							
EW	1.23	0.95	1.00	0.92	0.74	-0.50***	(3.38)
VW	1.24	1.04	0.95	0.95	0.72	-0.52***	(2.61)
FF 5-factor alpha	0.29	0.01	0.07	-0.03	-0.18	-0.47***	(3.16)
HXZ 4-factor alpha	0.50	0.20	0.21	0.13	-0.04	-0.54***	(3.60)
Panel E: J=3, K=12							
EW	1.16	1.00	0.97	0.94	0.80	-0.36***	(2.79)
VW	1.22	1.11	0.91	0.99	0.74	-0.48***	(2.63)
FF 5-factor alpha	0.30	0.07	0.02	-0.08	-0.14	-0.44***	(3.45)
HXZ 4-factor alpha	0.50	0.24	0.17	0.11	0.03	-0.47***	(3.61)
Panel F: J=3, K=15							
EW	1.11	1.06	0.99	0.97	0.84	-0.27**	(2.31)
VW	1.17	1.15	0.94	1.03	0.78	-0.39**	(2.37)
FF 5-factor alpha	0.25	0.12	0.03	-0.08	-0.06	-0.31***	(2.70)
HXZ 4-factor alpha	0.43	0.28	0.19	0.12	0.11	-0.33***	(2.79)

Table A4

Returns of AIUR Portfolios: J=12

This table reports the monthly excess returns or abnormal returns (in percentage) of quintile portfolios sorted on AIUR, which is constructed as the J-month moving average of residuals from regression of the logarithm of all-in-undrawn spread on a set of loan spread determinants where the regression is run with the full sample. Every month, firms which borrowed loans over the past J months are sorted into quintile portfolios based on the AIUR measure and held for K months. The average monthly equally weighted excess returns (EW), the average monthly weighted excess returns with the facility amount scaled by total assets as the weight (VW), abnormal returns (alpha) from Fama and French (2015) five-factor model and Hou et al. (2015) four-factor model are presented in each panel for different values of K. The sample period is from January 1994 to December 2016. *t*-statistics for the return spread between the highest and lowest AIUR quintile portfolios are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

	AIUR						
	L	2	3	4	H	H-L	*t*--stat
Panel A: J=12, K=1							
EW	1.38	1.09	1.16	1.05	0.85	-0.53***	(2.97)
VW	1.44	1.20	1.04	1.12	0.62	-0.82***	(3.30)
FF 5-factor alpha	0.29	-0.02	-0.05	-0.11	-0.26	-0.55***	(3.24)
HXZ 4-factor alpha	0.55	0.26	0.23	0.18	0.05	-0.50***	(2.94)
Panel B: J=12 K=3							
EW	1.17	1.00	1.01	0.92	0.76	-0.42***	(2.92)
VW	1.26	1.04	0.93	0.93	0.60	-0.66***	(3.33)
FF 5-factor alpha	0.34	0.08	0.04	-0.07	-0.15	-0.48***	(3.54)
HXZ 4-factor alpha	0.54	0.24	0.21	0.11	0.04	-0.50***	(3.64)
Panel C: J=12, K=6							
EW	1.12	1.04	1.01	0.93	0.81	-0.31**	(2.28)
VW	1.23	1.11	0.94	0.95	0.66	-0.57***	(3.06)
FF 5-factor alpha	0.31	0.12	0.04	-0.04	-0.10	-0.40***	(3.17)
HXZ 4-factor alpha	0.49	0.28	0.23	0.14	0.08	-0.41***	(3.20)
Panel D: J=12, K=9							
EW	1.07	1.06	0.98	0.93	0.82	-0.25*	(1.85)
VW	1.18	1.14	0.92	0.96	0.70	-0.48***	(2.62)
FF 5-factor alpha	0.25	0.14	0.02	-0.05	-0.09	-0.34***	(2.73)
HXZ 4-factor alpha	0.42	0.29	0.21	0.13	0.10	-0.33***	(2.63)
Panel E: J=12, K=12							
EW	1.01	1.08	0.93	0.92	0.82	-0.19	(1.43)
VW	1.10	1.14	0.88	0.94	0.74	-0.36*	(1.96)
FF 5-factor alpha	0.20	0.16	-0.03	-0.07	-0.10	-0.30**	(2.42)
HXZ 4-factor alpha	0.36	0.32	0.17	0.11	0.10	-0.26**	(2.14)
Panel F: J=12, K=15							
EW	0.99	1.06	0.92	0.90	0.82	-0.17	(1.25)
VW	1.06	1.11	0.89	0.91	0.79	-0.27	(1.49)
FF 5-factor alpha	0.17	0.15	-0.03	-0.08	-0.11	-0.27**	(2.24)
HXZ 4-factor alpha	0.32	0.30	0.17	0.11	0.09	-0.22*	(1.83)

Table A5

Fama-MacBeth Return Regressions: J=9

This table shows results from Fama-MacBeth regressions of firm's K-month average excess returns (in percentage) on the measure AIUR as well as controls for expected returns. The values of K are 1, 3, 6, 9, 12, and 15. AIUR is constructed as the J-month moving average of residuals from regression of the logarithm of all-in-undrawn spread on a set of loan spread determinants where the regression is run with the full sample. The control variables include reversal (R01), momentum (R12), book-to-market ratio (BM), market leverage (ML), firm size (SZ), Amihud (2002) illiquidity (ILLIQ), idiosyncratic volatility (IDVOL), analyst forecast dispersion (DISP), asset growth (AG), unrated indicator (UNRATED), and speculative-grade indicator (SPECULATIVE). The detailed definitions are provided in Table 0. The sample period is from January 1994 to December 2016. *t*-statistics (based on Newey-West standard errors) are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A

	1-month					3-month					6-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.46***		-0.35***		-0.34***	-0.42***		-0.33***		-0.33***	-0.26***		-0.20**		-0.22***
	(3.69)		(3.20)		(3.21)	(3.65)		(3.35)		(3.67)	(2.84)		(2.30)		(2.82)
R01		-0.02**	-0.02**	-0.02**	-0.02**		-0.01	-0.01	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00
		(2.32)	(2.31)	(2.29)	(2.24)		(1.03)	(0.98)	(0.93)	(0.86)		(0.33)	(0.29)	(0.20)	(0.14)
R12		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00		-0.00	-0.00	0.00	0.00
		(0.57)	(0.59)	(0.98)	(1.01)		(0.35)	(0.35)	(0.92)	(0.92)		(0.03)	(0.04)	(0.36)	(0.37)
BM		0.23**	0.23**	0.24**	0.24**		0.16*	0.16*	0.16*	0.16*		0.06	0.06	0.03	0.04
		(2.02)	(2.01)	(2.08)	(2.08)		(1.70)	(1.76)	(1.66)	(1.72)		(0.77)	(0.84)	(0.38)	(0.46)
ML		-0.19	-0.09	0.21	0.33		-0.19	-0.10	0.01	0.13		-0.04	0.01	0.01	0.08
		(0.44)	(0.21)	(0.52)	(0.83)		(0.52)	(0.27)	(0.02)	(0.37)		(0.15)	(0.04)	(0.02)	(0.30)
SZ		-0.02	-0.03	-0.02	-0.03		-0.03	-0.04	-0.05	-0.06		-0.05	-0.06	-0.07	-0.07*
		(0.29)	(0.50)	(0.36)	(0.54)		(0.59)	(0.78)	(0.96)	(1.15)		(1.29)	(1.47)	(1.64)	(1.85)
ILLIQ				4.31	2.95				-3.50	-3.74				0.94	0.84
				(0.84)	(0.72)				(1.10)	(1.12)				(1.00)	(0.91)
IDVOL				-0.12	-0.11				-0.08	-0.08				-0.04	-0.04
				(1.07)	(1.00)				(0.95)	(0.93)				(0.58)	(0.56)
DISP				-0.11*	-0.10*				-0.07*	-0.07				-0.04	-0.03
				(1.85)	(1.80)				(1.76)	(1.62)				(1.31)	(1.11)
AG				-0.49***	-0.48***				-0.55***	-0.54***				-0.66***	-0.65***
				(2.70)	(2.70)				(3.50)	(3.50)				(5.81)	(5.85)
UNRATED				0.11	0.10				-0.03	-0.04				-0.16*	-0.16*
				(0.81)	(0.78)				(0.29)	(0.33)				(1.74)	(1.82)
SPECULATIVE				-0.16	-0.19				-0.15	-0.18				-0.17*	-0.20**
				(0.93)	(1.11)				(1.10)	(1.37)				(1.75)	(2.05)
Intercept	0.94**	0.58	0.74	0.89	0.98	0.93***	0.88	0.98	1.45	1.55*	0.94***	1.24*	1.33*	1.74**	1.84**
	(2.46)	(0.53)	(0.68)	(0.90)	(1.01)	(2.72)	(0.95)	(1.08)	(1.62)	(1.75)	(3.39)	(1.77)	(1.91)	(2.43)	(2.58)
Adj. R^2	0.14%	6.66%	6.71%	9.76%	9.80%	0.23%	6.79%	6.87%	10.03%	10.08%	0.21%	6.43%	6.56%	10.00%	10.05%
Obs	86,056	86,056	86,056	86,056	86,056	85,222	85,222	85,222	85,222	85,222	83,696	83,696	83,696	83,696	83,696

Panel B

	9-month					12-month					15-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.16**		-0.12*		-0.15**	-0.11		-0.11*		-0.14***	-0.11*		-0.14***		-0.18***
	(2.19)		(1.75)		(2.27)	(1.62)		(1.92)		(2.61)	(1.66)		(2.64)		(3.47)
R01		0.00	0.00	0.00	0.00		0.00*	0.00*	0.00*	0.00*		0.00	0.00	0.00	0.00
		(0.80)	(0.85)	(0.86)	(0.94)		(1.71)	(1.73)	(1.75)	(1.79)		(1.21)	(1.24)	(1.29)	(1.34)
R12		-0.00	-0.00	0.00	0.00		-0.00	-0.00	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00
		(0.45)	(0.43)	(0.01)	(0.04)		(0.91)	(0.90)	(0.48)	(0.46)		(1.22)	(1.24)	(0.80)	(0.80)
BM		0.02	0.03	-0.02	-0.01		0.02	0.03	-0.02	-0.01		0.07	0.07	0.02	0.03
		(0.37)	(0.48)	(0.27)	(0.17)		(0.37)	(0.47)	(0.31)	(0.24)		(1.18)	(1.26)	(0.46)	(0.52)
ML		0.10	0.14	0.11	0.16		0.17	0.20	0.16	0.21		0.18	0.22	0.18	0.25
		(0.38)	(0.50)	(0.43)	(0.62)		(0.73)	(0.86)	(0.74)	(0.94)		(0.90)	(1.11)	(0.98)	(1.28)
SZ		-0.07**	-0.08**	-0.08**	-0.09***		-0.09***	-0.09***	-0.09***	-0.10***		-0.09***	-0.09***	-0.10***	-0.10***
		(2.03)	(2.13)	(2.56)	(2.74)		(2.64)	(2.64)	(3.20)	(3.33)		(2.96)	(2.94)	(3.38)	(3.54)
ILLIQ				0.72	0.61				0.20	0.12				-0.29	-0.40
				(0.84)	(0.73)				(0.38)	(0.22)				(0.58)	(0.76)
IDVOL				0.01	0.01				0.03	0.03				0.05	0.05
				(0.21)	(0.24)				(0.59)	(0.66)				(1.00)	(1.07)
DISP				-0.00	0.00				0.02	0.02				0.02	0.02
				(0.15)	(0.03)				(0.72)	(0.80)				(0.96)	(1.07)
AG				-0.69***	-0.69***				-0.66***	-0.67***				-0.61***	-0.61***
				(7.24)	(7.29)				(8.12)	(8.23)				(8.16)	(8.28)
UNRATED				-0.24***	-0.26***				-0.27***	-0.29***				-0.23***	-0.26***
				(2.96)	(3.22)				(3.64)	(4.12)				(4.11)	(4.71)
SPECULATIVE				-0.23***	-0.26***				-0.23***	-0.27***				-0.26***	-0.30***
				(2.84)	(3.28)				(3.56)	(4.25)				(4.54)	(5.36)
Intercept	0.95***	1.56***	1.61***	1.96***	2.05***	0.95***	1.79***	1.80***	2.12***	2.18***	0.93***	1.83***	1.82***	2.10***	2.16***
	(4.23)	(2.67)	(2.74)	(3.40)	(3.54)	(4.92)	(3.39)	(3.39)	(4.12)	(4.24)	(5.50)	(3.75)	(3.74)	(4.31)	(4.45)
Adj. R^2	0.19%	6.94%	7.08%	10.51%	10.60%	0.22%	7.16%	7.28%	10.64%	10.70%	0.31%	6.99%	7.14%	10.44%	10.56%
Obs	81,965	81,965	81,965	81,965	81,965	80,145	80,145	80,145	80,145	80,145	78,239	78,239	78,239	78,239	78,239

Table A6

Fama-MacBeth Return Regressions: J=6

This table shows results from Fama-MacBeth regressions of firm's K-month average excess returns (in percentage) on the measure AIUR as well as controls for expected returns. The values of K are 1, 3, 6, 9, 12, and 15. AIUR is constructed as the J-month moving average of residuals from regression of the logarithm of all-in-undrawn spread on a set of loan spread determinants where the regression is run with the full sample. The control variables include reversal (R01), momentum (R12), book-to-market ratio (BM), market leverage (ML), firm size (SZ), Amihud (2002) illiquidity (ILLIQ), idiosyncratic volatility (IDVOL), analyst forecast dispersion (DISP), asset growth (AG), unrated indicator (UNRATED), and speculative-grade indicator (SPECULATIVE). The detailed definitions are provided in Table 0. The sample period is from January 1994 to December 2016. *t*-statistics (based on Newey-West standard errors) are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A

	1-month					3-month					6-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.42***		-0.37***		-0.40***	-0.35***		-0.31***		-0.30***	-0.31***		-0.27***		-0.27***
	(2.91)		(2.81)		(3.13)	(2.75)		(2.76)		(2.72)	(3.14)		(2.87)		(3.09)
R01		-0.02**	-0.02**	-0.02**	-0.02**		-0.01	-0.01	-0.01	-0.01		-0.00	-0.00	-0.00	-0.00
		(2.48)	(2.44)	(2.44)	(2.34)		(1.18)	(1.09)	(1.19)	(1.08)		(0.23)	(0.17)	(0.13)	(0.04)
R12		0.00	0.00	0.00	0.00		-0.00	-0.00	0.00	0.00		-0.00	-0.00	-0.00	-0.00
		(0.08)	(0.15)	(0.34)	(0.40)		(0.06)	(0.04)	(0.40)	(0.43)		(0.48)	(0.47)	(0.23)	(0.21)
BM		0.15	0.17	0.19	0.20		0.09	0.10	0.10	0.10		0.05	0.06	0.02	0.03
		(1.05)	(1.14)	(1.41)	(1.47)		(0.83)	(0.86)	(0.92)	(0.93)		(0.64)	(0.69)	(0.27)	(0.33)
ML		-0.41	-0.32	-0.05	0.09		-0.29	-0.19	-0.01	0.12		-0.21	-0.13	-0.05	0.05
		(0.92)	(0.70)	(0.12)	(0.19)		(0.83)	(0.55)	(0.04)	(0.33)		(0.70)	(0.43)	(0.19)	(0.16)
SZ		0.01	-0.01	-0.05	-0.06		-0.01	-0.02	-0.04	-0.05		-0.03	-0.04	-0.04	-0.05
		(0.10)	(0.12)	(0.64)	(0.82)		(0.16)	(0.36)	(0.61)	(0.80)		(0.69)	(0.94)	(0.86)	(1.05)
ILLIQ				-6.64	-7.66				-4.62	-5.19*				-3.42	-3.70
				(0.69)	(0.78)				(1.64)	(1.70)				(0.84)	(0.86)
IDVOL				-0.23**	-0.21*				-0.12	-0.12				-0.05	-0.05
				(2.09)	(1.96)				(1.30)	(1.27)				(0.68)	(0.64)
DISP				-0.06	-0.06				-0.09	-0.09				-0.07	-0.06
				(0.67)	(0.62)				(1.14)	(1.07)				(1.19)	(1.08)
AG				-0.51**	-0.49**				-0.47***	-0.46***				-0.70***	-0.70***
				(2.56)	(2.47)				(2.71)	(2.63)				(5.33)	(5.40)
UNRATED				0.08	0.06				0.04	0.04				-0.08	-0.08
				(0.49)	(0.39)				(0.37)	(0.37)				(0.93)	(0.89)
SPECULATIVE				-0.09	-0.14				-0.06	-0.09				-0.11	-0.13
				(0.46)	(0.68)				(0.41)	(0.58)				(0.94)	(1.10)
Intercept	0.92**	0.22	0.41	1.58	1.71	0.92***	0.54	0.67	1.30	1.41	0.93***	0.91	1.03	1.38*	1.46*
	(2.34)	(0.18)	(0.33)	(1.22)	(1.32)	(2.60)	(0.52)	(0.66)	(1.25)	(1.38)	(3.28)	(1.26)	(1.45)	(1.74)	(1.87)
Adj. R^2	0.15%	6.84%	6.90%	10.63%	10.71%	0.24%	7.15%	7.22%	10.90%	10.94%	0.17%	6.80%	6.89%	11.17%	11.21%
Obs	58,786	58,786	58,786	58,786	58,786	58,290	58,290	58,290	58,290	58,290	57,322	57,322	57,322	57,322	57,322

Panel B

	9-month					12-month					15-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.20**		-0.16*		-0.17**	-0.11		-0.12*		-0.14**	-0.10		-0.15***		-0.18***
	(2.32)		(1.89)		(2.30)	(1.60)		(1.80)		(2.29)	(1.42)		(2.65)		(3.25)
R01		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
		(0.57)	(0.63)	(0.47)	(0.54)		(1.31)	(1.36)	(1.18)	(1.24)		(1.13)	(1.19)	(0.97)	(1.03)
R12		-0.00	-0.00	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00		-0.00	-0.00*	-0.00	-0.00
		(0.72)	(0.70)	(0.39)	(0.36)		(1.31)	(1.30)	(1.05)	(1.00)		(1.65)	(1.68)	(1.42)	(1.42)
BM		0.02	0.03	-0.02	-0.02		-0.02	-0.01	-0.07	-0.06		0.04	0.05	-0.01	-0.01
		(0.26)	(0.34)	(0.28)	(0.19)		(0.27)	(0.16)	(0.98)	(0.88)		(0.66)	(0.72)	(0.16)	(0.10)
ML		-0.05	-0.01	-0.00	0.06		0.13	0.16	0.15	0.19		0.21	0.25	0.18	0.23
		(0.18)	(0.03)	(0.00)	(0.22)		(0.54)	(0.64)	(0.61)	(0.76)		(1.01)	(1.20)	(0.91)	(1.15)
SZ		-0.05	-0.05	-0.06*	-0.07*		-0.07**	-0.07**	-0.08**	-0.08***		-0.08***	-0.08***	-0.08***	-0.09***
		(1.35)	(1.59)	(1.68)	(1.94)		(2.10)	(2.18)	(2.47)	(2.63)		(2.61)	(2.63)	(2.62)	(2.81)
ILLIQ				1.41	1.23				1.04	0.87				0.64	0.38
				(0.85)	(0.79)				(0.95)	(0.84)				(1.21)	(0.67)
IDVOL				-0.02	-0.02				0.01	0.02				0.05	0.06
				(0.35)	(0.30)				(0.27)	(0.36)				(1.11)	(1.19)
DISP				-0.05	-0.05				-0.01	-0.01				-0.01	-0.00
				(1.39)	(1.27)				(0.31)	(0.25)				(0.18)	(0.09)
AG				-0.77***	-0.77***				-0.71***	-0.71***				-0.65***	-0.66***
				(6.84)	(6.99)				(7.17)	(7.29)				(7.43)	(7.56)
UNRATED				-0.18**	-0.19**				-0.25***	-0.28***				-0.24***	-0.27***
				(1.98)	(2.08)				(2.76)	(3.10)				(3.31)	(3.81)
SPECULATIVE				-0.18*	-0.21**				-0.21***	-0.25***				-0.24***	-0.28***
				(1.90)	(2.15)				(2.98)	(3.45)				(3.74)	(4.42)
Intercept	0.94***	1.22**	1.31**	1.68***	1.78***	0.95***	1.57***	1.61***	1.91***	1.99***	0.95***	1.74***	1.75***	1.93***	2.01***
	(4.07)	(2.10)	(2.30)	(2.80)	(2.98)	(4.81)	(2.92)	(2.99)	(3.57)	(3.72)	(5.42)	(3.43)	(3.44)	(3.62)	(3.80)
Adj. R^2	0.18%	7.22%	7.41%	11.53%	11.65%	0.14%	7.58%	7.67%	11.70%	11.78%	0.21%	7.62%	7.70%	11.72%	11.79%
Obs	56,183	56,183	56,183	56,183	56,183	54,974	54,974	54,974	54,974	54,974	53,707	53,707	53,707	53,707	53,707

Table A7

Fama-MacBeth Return Regressions: J=3

This table shows results from Fama-MacBeth regressions of firm's K-month average excess returns (in percentage) on the measure AIUR as well as controls for expected returns. The values of K are 1, 3, 6, 9, 12, and 15. AIUR is constructed as the J-month moving average of residuals from regression of the logarithm of all-in-undrawn spread on a set of loan spread determinants where the regression is run with the full sample. The control variables include reversal (R01), momentum (R12), book-to-market ratio (BM), market leverage (ML), firm size (SZ), Amihud (2002) illiquidity (ILLIQ), idiosyncratic volatility (IDVOL), analyst forecast dispersion (DISP), asset growth (AG), unrated indicator (UNRATED), and speculative-grade indicator (SPECULATIVE). The detailed definitions are provided in Table 0. The sample period is from January 1994 to December 2016. *t*-statistics (based on Newey-West standard errors) are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A

	1-month					3-month					6-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.45***		-0.41**		-0.43***	-0.53***		-0.57***		-0.59***	-0.35***		-0.32***		-0.31***
	(2.62)		(2.35)		(2.81)	(3.71)		(4.05)		(4.13)	(3.27)		(2.98)		(2.67)
R01		-0.02**	-0.02**	-0.02**	-0.02*		-0.01	-0.00	-0.01	-0.01		-0.00	-0.00	-0.00	-0.00
		(2.20)	(2.00)	(2.04)	(1.81)		(0.81)	(0.70)	(1.08)	(0.97)		(0.15)	(0.14)	(0.59)	(0.62)
R12		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00		-0.00	-0.00	-0.00	-0.00
		(0.66)	(0.84)	(0.20)	(0.56)		(0.35)	(0.42)	(0.40)	(0.54)		(0.41)	(0.42)	(0.40)	(0.38)
BM		0.28	0.27	0.10	0.11		0.21	0.21	0.12	0.12		0.10	0.10	-0.01	-0.01
		(1.60)	(1.59)	(0.56)	(0.59)		(1.46)	(1.48)	(0.82)	(0.83)		(0.89)	(0.91)	(0.06)	(0.08)
ML		-0.34	-0.21	-0.09	0.14		-0.45	-0.24	-0.43	-0.14		-0.28	-0.17	-0.22	-0.07
		(0.54)	(0.33)	(0.13)	(0.19)		(0.97)	(0.50)	(0.93)	(0.28)		(0.88)	(0.49)	(0.72)	(0.23)
SZ		0.03	0.00	0.01	0.01		0.01	0.00	-0.03	-0.06		-0.01	-0.02	-0.03	-0.04
		(0.32)	(0.04)	(0.13)	(0.08)		(0.21)	(0.00)	(0.43)	(0.75)		(0.25)	(0.39)	(0.53)	(0.69)
ILLIQ				14.33	11.25				1.50	-0.33				1.55	1.67
				(1.03)	(0.84)				(0.18)	(0.04)				(0.25)	(0.27)
IDVOL				-0.13	-0.10				-0.13	-0.12				-0.06	-0.05
				(1.00)	(0.76)				(1.20)	(1.06)				(0.64)	(0.58)
DISP				0.01	0.06				-0.05	-0.01				-0.07	-0.03
				(0.03)	(0.22)				(0.34)	(0.08)				(0.51)	(0.26)
AG				-0.59*	-0.59*				-0.69***	-0.64***				-0.80***	-0.80***
				(1.82)	(1.78)				(2.90)	(2.67)				(4.12)	(4.08)
UNRATED				0.03	0.06				-0.06	-0.06				-0.10	-0.10
				(0.12)	(0.20)				(0.34)	(0.30)				(0.79)	(0.77)
SPECULATIVE				-0.23	-0.28				-0.08	-0.14				-0.08	-0.12
				(0.83)	(1.01)				(0.39)	(0.71)				(0.59)	(0.76)
Intercept	0.90**	-0.15	0.11	0.56	0.50	0.90**	0.16	0.30	1.38	1.60	0.91***	0.60	0.66	1.26	1.32
	(2.35)	(0.11)	(0.08)	(0.34)	(0.31)	(2.49)	(0.15)	(0.28)	(1.07)	(1.26)	(3.12)	(0.76)	(0.84)	(1.34)	(1.42)
Adj. R^2	0.01%	7.45%	7.44%	12.64%	12.54%	0.17%	8.72%	8.91%	13.73%	13.83%	0.15%	7.61%	7.68%	13.74%	13.82%
Obs	29,891	29,891	29,891	29,891	29,891	29,683	29,683	29,683	29,683	29,683	29,267	29,267	29,267	29,267	29,267

Panel B

	9-month					12-month					15-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.35***		-0.32***		-0.33***	-0.18**		-0.17**		-0.19**	-0.15**		-0.21***		-0.25***
	(3.73)		(3.20)		(3.35)	(2.23)		(2.19)		(2.29)	(2.17)		(3.54)		(3.84)
R01		0.00	0.00	0.00	0.00		0.01*	0.01*	0.00	0.00		0.00*	0.00*	0.00	0.00
		(0.72)	(0.72)	(0.26)	(0.25)		(1.91)	(1.96)	(1.27)	(1.33)		(1.67)	(1.69)	(0.91)	(0.96)
R12		-0.00	-0.00	-0.00	0.00		-0.00	-0.00	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00
		(0.45)	(0.45)	(0.02)	(0.01)		(0.97)	(0.98)	(0.65)	(0.60)		(1.59)	(1.64)	(1.24)	(1.23)
BM		0.10	0.10	0.02	0.02		0.04	0.05	-0.03	-0.03		0.06	0.06	-0.03	-0.04
		(1.15)	(1.17)	(0.17)	(0.16)		(0.57)	(0.59)	(0.31)	(0.28)		(0.76)	(0.75)	(0.40)	(0.42)
ML		-0.22	-0.14	-0.29	-0.17		-0.06	-0.02	-0.08	0.00		0.10	0.16	0.01	0.10
		(0.75)	(0.46)	(1.00)	(0.55)		(0.20)	(0.07)	(0.28)	(0.01)		(0.44)	(0.67)	(0.06)	(0.43)
SZ		-0.02	-0.03	-0.03	-0.04		-0.04	-0.04	-0.04	-0.05		-0.07**	-0.07**	-0.06*	-0.07**
		(0.47)	(0.69)	(0.63)	(1.03)		(1.12)	(1.28)	(1.18)	(1.52)		(2.09)	(2.18)	(1.70)	(2.11)
ILLIQ				2.70	2.26				6.20**	6.05**				5.41**	5.22**
				(0.61)	(0.49)				(2.01)	(1.97)				(2.27)	(2.30)
IDVOL				-0.02	-0.02				-0.01	0.00				0.06	0.07
				(0.31)	(0.23)				(0.10)	(0.04)				(1.11)	(1.19)
DISP				0.00	0.04				-0.06	-0.04				0.00	0.02
				(0.03)	(0.33)				(0.93)	(0.64)				(0.06)	(0.37)
AG				-0.91***	-0.92***				-0.82***	-0.83***				-0.74***	-0.74***
				(5.58)	(5.64)				(6.17)	(6.23)				(6.11)	(6.05)
UNRATED				-0.20*	-0.21*				-0.25**	-0.27**				-0.28***	-0.32***
				(1.70)	(1.70)				(2.10)	(2.26)				(2.84)	(3.24)
SPECULATIVE				-0.15	-0.20				-0.19*	-0.23**				-0.24***	-0.29***
				(1.23)	(1.51)				(1.92)	(2.21)				(3.12)	(3.68)
Intercept	0.92***	0.78	0.87	1.25*	1.44**	0.93***	1.12**	1.20**	1.41**	1.53***	0.96***	1.59***	1.63***	1.56***	1.73***
	(3.89)	(1.22)	(1.39)	(1.75)	(2.05)	(4.60)	(1.98)	(2.11)	(2.44)	(2.67)	(5.28)	(2.92)	(2.98)	(2.77)	(3.12)
Adj. R^2	0.21%	7.97%	8.20%	14.14%	14.33%	0.11%	8.45%	8.53%	14.62%	14.83%	-0.02%	8.87%	8.75%	14.73%	14.70%
Obs	28,703	28,703	28,703	28,703	28,703	28,113	28,113	28,113	28,113	28,113	27,483	27,483	27,483	27,483	27,483

Table A8

Fama-MacBeth Return Regressions: J=12

This table shows results from Fama-MacBeth regressions of firm's K-month average excess returns (in percentage) on the measure AIUR as well as controls for expected returns. The values of K are 1, 3, 6, 9, 12, and 15. AIUR is constructed as the J-month moving average of residuals from regression of the logarithm of all-in-undrawn spread on a set of loan spread determinants where the regression is run with the full sample. The control variables include reversal (R01), momentum (R12), book-to-market ratio (BM), market leverage (ML), firm size (SZ), Amihud (2002) illiquidity (ILLIQ), idiosyncratic volatility (IDVOL), analyst forecast dispersion (DISP), asset growth (AG), unrated indicator (UNRATED), and speculative-grade indicator (SPECULATIVE). The detailed definitions are provided in Table 0. The sample period is from January 1994 to December 2016. *t*-statistics (based on Newey-West standard errors) are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A

	1-month					3-month					6-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.37***		-0.28***		-0.30***	-0.30***		-0.24***		-0.26***	-0.19**		-0.16**		-0.19***
	(3.01)		(2.73)		(3.08)	(2.77)		(2.72)		(3.21)	(2.18)		(2.14)		(2.72)
R01		-0.01**	-0.01**	-0.01**	-0.01**		-0.00	-0.00	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00
		(1.99)	(1.98)	(2.07)	(2.03)		(0.62)	(0.57)	(0.74)	(0.66)		(0.28)	(0.23)	(0.22)	(0.13)
R12		0.00	0.00	0.01**	0.01**		0.00	0.00	0.00	0.00*		0.00	0.00	0.00	0.00
		(1.60)	(1.60)	(2.25)	(2.25)		(0.98)	(0.98)	(1.64)	(1.67)		(0.36)	(0.39)	(0.91)	(0.96)
BM		0.27***	0.28***	0.29***	0.30***		0.16**	0.17**	0.16**	0.16**		0.05	0.06	0.02	0.03
		(2.83)	(2.89)	(3.05)	(3.07)		(2.05)	(2.15)	(1.99)	(2.07)		(0.72)	(0.81)	(0.28)	(0.36)
ML		-0.26	-0.18	-0.09	0.02		-0.11	-0.03	-0.05	0.05		0.06	0.12	0.06	0.14
		(0.62)	(0.42)	(0.24)	(0.04)		(0.30)	(0.08)	(0.17)	(0.16)		(0.21)	(0.40)	(0.23)	(0.51)
SZ		-0.04	-0.05	-0.09	-0.10*		-0.06	-0.07	-0.09*	-0.10**		-0.08*	-0.09**	-0.10**	-0.10***
		(0.71)	(0.88)	(1.64)	(1.86)		(1.11)	(1.27)	(1.80)	(2.02)		(1.87)	(2.00)	(2.51)	(2.69)
ILLIQ				0.40	-0.13				-1.63	-1.66				-0.14	-0.20
				(0.16)	(0.06)				(1.52)	(1.50)				(0.21)	(0.29)
IDVOL				-0.14	-0.14				-0.08	-0.07				-0.03	-0.02
				(1.43)	(1.38)				(0.91)	(0.90)				(0.39)	(0.37)
DISP				-0.03	-0.03				-0.04*	-0.04*				-0.00	0.00
				(1.21)	(0.93)				(1.94)	(1.69)				(0.06)	(0.18)
AG				-0.44***	-0.43***				-0.51***	-0.50***				-0.60***	-0.60***
				(3.01)	(2.95)				(3.90)	(3.86)				(6.07)	(6.06)
UNRATED				-0.09	-0.11				-0.13	-0.14				-0.22**	-0.23***
				(0.67)	(0.84)				(1.19)	(1.27)				(2.54)	(2.73)
SPECULATIVE				-0.20	-0.25				-0.15	-0.18				-0.19**	-0.22**
				(1.31)	(1.64)				(1.31)	(1.61)				(2.20)	(2.58)
Intercept	0.92**	1.01	1.13	2.11**	2.26**	0.94***	1.27	1.37	2.02**	2.16**	0.96***	1.62**	1.70**	2.12***	2.24***
	(2.48)	(0.93)	(1.05)	(2.20)	(2.35)	(2.77)	(1.37)	(1.47)	(2.38)	(2.53)	(3.50)	(2.24)	(2.34)	(3.18)	(3.31)
Adj. R^2	0.15%	6.06%	6.12%	8.75%	8.81%	0.20%	6.38%	6.44%	9.13%	9.16%	0.19%	6.52%	6.63%	9.63%	9.70%
Obs	111,217	111,217	111,217	111,217	111,217	110,032	110,032	110,032	110,032	110,032	107,960	107,960	107,960	107,960	107,960

Panel B

	9-month					12-month					15-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.12		-0.12*		-0.14**	-0.10		-0.11**		-0.15***	-0.08		-0.12**		-0.16***
	(1.64)		(1.80)		(2.44)	(1.44)		(2.08)		(3.03)	(1.24)		(2.44)		(3.38)
R01		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
		(0.47)	(0.51)	(0.46)	(0.54)		(1.44)	(1.47)	(1.41)	(1.46)		(0.92)	(0.95)	(1.00)	(1.05)
R12		0.00	0.00	0.00	0.00		-0.00	-0.00	0.00	0.00		-0.00	-0.00	-0.00	-0.00
		(0.00)	(0.03)	(0.51)	(0.57)		(0.43)	(0.41)	(0.08)	(0.13)		(0.72)	(0.73)	(0.09)	(0.07)
BM		0.04	0.04	0.00	0.01		0.04	0.04	0.01	0.01		0.06	0.06	0.03	0.04
		(0.68)	(0.76)	(0.03)	(0.09)		(0.71)	(0.79)	(0.21)	(0.25)		(1.09)	(1.14)	(0.67)	(0.70)
ML		0.12	0.16	0.10	0.16		0.14	0.18	0.11	0.17		0.14	0.18	0.11	0.18
		(0.46)	(0.62)	(0.41)	(0.65)		(0.63)	(0.82)	(0.53)	(0.81)		(0.72)	(0.96)	(0.64)	(0.98)
SZ		-0.09**	-0.09**	-0.11***	-0.11***		-0.09***	-0.09***	-0.10***	-0.11***		-0.10***	-0.10***	-0.10***	-0.11***
		(2.48)	(2.54)	(3.22)	(3.34)		(2.88)	(2.87)	(3.49)	(3.60)		(3.34)	(3.30)	(3.66)	(3.75)
ILLIQ				-0.01	-0.06				-0.16	-0.20				0.08	0.04
				(0.02)	(0.11)				(0.40)	(0.50)				(0.31)	(0.16)
IDVOL				0.00	0.00				0.02	0.02				0.04	0.04
				(0.01)	(0.04)				(0.35)	(0.41)				(0.76)	(0.83)
DISP				0.01	0.01				0.02	0.02				0.02	0.02
				(0.48)	(0.67)				(0.97)	(1.14)				(1.11)	(1.32)
AG				-0.66***	-0.66***				-0.63***	-0.64***				-0.60***	-0.60***
				(7.76)	(7.80)				(8.32)	(8.35)				(8.45)	(8.50)
UNRATED				-0.27***	-0.28***				-0.26***	-0.28***				-0.21***	-0.24***
				(3.53)	(3.89)				(3.72)	(4.20)				(3.99)	(4.52)
SPECULATIVE				-0.22***	-0.25***				-0.23***	-0.26***				-0.22***	-0.26***
				(2.96)	(3.50)				(3.60)	(4.34)				(4.23)	(5.09)
Intercept	0.96***	1.82***	1.86***	2.29***	2.38***	0.93***	1.90***	1.90***	2.24***	2.30***	0.93***	1.98***	1.97***	2.18***	2.22***
	(4.26)	(3.03)	(3.08)	(3.99)	(4.09)	(4.89)	(3.57)	(3.56)	(4.36)	(4.45)	(5.52)	(4.13)	(4.09)	(4.57)	(4.65)
Adj. R^2	0.21%	6.98%	7.12%	10.02%	10.11%	0.28%	7.01%	7.14%	10.24%	10.32%	0.32%	6.79%	6.92%	10.13%	10.22%
Obs	105,641	105,641	105,641	105,641	105,641	103,211	103,211	103,211	103,211	103,211	100,767	100,767	100,767	100,767	100,767

Table A9

Panel Regressions: J=9

This table shows results from panel regressions of firm's K-month average excess returns (in percentage) on the measure AIUR as well as controls for expected returns. The values of K are 1, 3, 6, 9, 12, and 15. AIUR is constructed as the J-month moving average of residuals from regression of the logarithm of all-in-undrawn spread on a set of loan spread determinants where the regression is run with the full sample. The control variables include reversal (R01), momentum (R12), book-to-market ratio (BM), market leverage (ML), firm size (SZ), Amihud (2002) illiquidity (ILLIQ), idiosyncratic volatility (IDVOL), analyst forecast dispersion (DISP), asset growth (AG), unrated indicator (UNRATED), and speculative-grade indicator (SPECULATIVE). The detailed definitions are provided in Table 0. The sample period is from January 1994 to December 2016. *t*-statistics (based on standard errors clustered by firm and month) are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A

	1-month					3-month					6-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.36***		-0.52***		-0.54***	-0.30***		-0.47***		-0.48***	-0.20*		-0.38***		-0.38***
	(2.81)		(3.73)		(3.85)	(2.59)		(3.78)		(3.85)	(1.89)		(3.37)		(3.37)
R01		0.01	0.01	0.01	0.01		-0.00	0.00	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00
		(0.65)	(0.66)	(0.62)	(0.64)		(0.01)	(0.01)	(0.09)	(0.07)		(0.42)	(0.40)	(0.59)	(0.57)
R12		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
		(1.13)	(1.15)	(1.28)	(1.31)		(1.08)	(1.11)	(1.34)	(1.38)		(1.22)	(1.25)	(1.55)	(1.60)
BM		0.46**	0.47**	0.44**	0.44**		0.41***	0.41***	0.38***	0.38***		0.40***	0.40***	0.35***	0.35***
		(2.51)	(2.52)	(2.43)	(2.44)		(3.35)	(3.37)	(3.20)	(3.22)		(3.38)	(3.40)	(3.13)	(3.14)
ML		0.51	0.70	0.55	0.76		0.55	0.72*	0.52	0.71*		0.62*	0.76**	0.45	0.60*
		(0.97)	(1.29)	(1.04)	(1.40)		(1.42)	(1.81)	(1.30)	(1.73)		(1.86)	(2.22)	(1.31)	(1.70)
SZ		-0.01	-0.02	-0.03	-0.05		-0.04	-0.05	-0.03	-0.04		-0.05	-0.06	-0.04	-0.05
		(0.14)	(0.25)	(0.35)	(0.51)		(0.65)	(0.79)	(0.44)	(0.63)		(1.31)	(1.48)	(0.72)	(0.91)
ILLIQ				-0.01	-0.01				0.00	-0.00				0.02*	0.01*
				(0.41)	(0.48)				(0.11)	(0.05)				(1.78)	(1.67)
IDVOL				0.07	0.07				0.14	0.13				0.18*	0.18*
				(0.31)	(0.30)				(1.00)	(0.99)				(1.71)	(1.70)
DISP				0.00	0.00				0.00	0.00				-0.00	-0.00
				(0.72)	(0.70)				(1.45)	(1.44)				(0.31)	(0.36)
AG				-0.30	-0.29				-0.30*	-0.29*				-0.31*	-0.31*
				(1.63)	(1.63)				(1.77)	(1.78)				(1.73)	(1.74)
UNRATED				-0.28	-0.30				-0.31*	-0.33*				-0.40**	-0.41***
				(1.28)	(1.37)				(1.77)	(1.88)				(2.56)	(2.66)
SPECULATIVE				-0.38	-0.42				-0.37**	-0.41**				-0.34**	-0.37**
				(1.47)	(1.62)				(2.01)	(2.19)				(2.21)	(2.39)
Intercept	0.81**	0.48	0.56	0.89	1.07	0.82***	0.89	0.96	0.81	0.97	0.80***	1.09*	1.15*	0.91	1.04
	(2.53)	(0.35)	(0.40)	(0.53)	(0.64)	(4.04)	(0.96)	(1.04)	(0.65)	(0.78)	(5.60)	(1.70)	(1.79)	(0.90)	(1.03)
Adj. R^2	0.01%	0.16%	0.18%	0.19%	0.21%	0.02%	0.36%	0.42%	0.51%	0.56%	0.02%	0.64%	0.71%	1.03%	1.10%
Obs	86,056	86,056	86,056	86,056	86,056	85,222	85,222	85,222	85,222	85,222	83,696	83,696	83,696	83,696	83,696

Panel B

	9-month					12-month					15-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.15		-0.35***		-0.35***	-0.10		-0.31***		-0.31***	-0.07		-0.28***		-0.29***
	(1.58)		(3.39)		(3.41)	(1.13)		(3.24)		(3.27)	(0.87)		(3.17)		(3.20)
R01		0.00	0.00	-0.00	-0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
		(0.20)	(0.23)	(0.04)	(0.01)		(0.65)	(0.68)	(0.37)	(0.40)		(0.40)	(0.43)	(0.02)	(0.06)
R12		0.00	0.00	0.00	0.00		-0.00	0.00	0.00	0.00		-0.00	-0.00	-0.00	-0.00
		(0.73)	(0.77)	(1.12)	(1.17)		(0.01)	(0.03)	(0.41)	(0.46)		(0.78)	(0.74)	(0.28)	(0.23)
BM		0.42***	0.42***	0.36***	0.36***		0.38***	0.38***	0.32***	0.32***		0.35***	0.36***	0.29***	0.30***
		(3.57)	(3.59)	(3.26)	(3.28)		(3.48)	(3.51)	(3.11)	(3.14)		(3.68)	(3.72)	(3.26)	(3.28)
ML		0.62**	0.75**	0.46	0.60*		0.68**	0.79***	0.57**	0.70**		0.73***	0.83***	0.67**	0.78***
		(2.05)	(2.41)	(1.46)	(1.87)		(2.45)	(2.79)	(1.98)	(2.37)		(2.88)	(3.23)	(2.53)	(2.91)
SZ		-0.08**	-0.09***	-0.08	-0.09*		-0.11***	-0.11***	-0.09**	-0.10**		-0.12***	-0.12***	-0.08**	-0.09**
		(2.44)	(2.61)	(1.48)	(1.67)		(3.33)	(3.48)	(1.97)	(2.16)		(3.96)	(4.11)	(1.99)	(2.18)
ILLIQ				0.01	0.01				0.01	0.01				0.01	0.01
				(1.26)	(1.18)				(1.01)	(0.91)				(1.11)	(0.99)
IDVOL				0.20**	0.19**				0.22***	0.21***				0.24***	0.24***
				(2.20)	(2.18)				(2.87)	(2.85)				(3.66)	(3.65)
DISP				-0.00	-0.00				-0.00	-0.00*				-0.00	-0.00
				(1.48)	(1.58)				(1.57)	(1.65)				(1.41)	(1.47)
AG				-0.34*	-0.34*				-0.31*	-0.31*				-0.28*	-0.28*
				(1.93)	(1.93)				(1.92)	(1.93)				(1.91)	(1.91)
UNRATED				-0.43***	-0.45***				-0.41***	-0.43***				-0.38***	-0.39***
				(3.19)	(3.29)				(3.36)	(3.46)				(3.31)	(3.41)
SPECULATIVE				-0.38***	-0.41***				-0.42***	-0.44***				-0.44***	-0.46***
				(2.94)	(3.13)				(3.27)	(3.44)				(3.58)	(3.73)
Intercept	0.79***	1.54***	1.59***	1.40	1.52*	0.79***	1.90***	1.95***	1.57**	1.68**	0.80***	2.05***	2.09***	1.37**	1.47**
	(6.70)	(2.79)	(2.89)	(1.55)	(1.68)	(7.36)	(3.71)	(3.81)	(1.99)	(2.12)	(8.17)	(4.49)	(4.58)	(1.98)	(2.12)
Adj. R^2	0.02%	1.05%	1.14%	1.73%	1.82%	0.01%	1.41%	1.51%	2.31%	2.40%	0.01%	1.82%	1.92%	2.99%	3.09%
Obs	81,965	81,965	81,965	81,965	81,965	80,145	80,145	80,145	80,145	80,145	78,239	78,239	78,239	78,239	78,239

Table A10

Panel Regressions: J=6

This table shows results from panel regressions of firm's K-month average excess returns (in percentage) on the measure AIUR as well as controls for expected returns. The values of K are 1, 3, 6, 9, 12, and 15. AIUR is constructed as the J-month moving average of residuals from regression of the logarithm of all-in-undrawn spread on a set of loan spread determinants where the regression is run with the full sample. The control variables include reversal (R01), momentum (R12), book-to-market ratio (BM), market leverage (ML), firm size (SZ), Amihud (2002) illiquidity (ILLIQ), idiosyncratic volatility (IDVOL), analyst forecast dispersion (DISP), asset growth (AG), unrated indicator (UNRATED), and speculative-grade indicator (SPECULATIVE). The detailed definitions are provided in Table 0. The sample period is from January 1994 to December 2016. *t*-statistics (based on standard errors clustered by firm and month) are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A

	1-month					3-month					6-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.28*		-0.43***		-0.45***	-0.22		-0.37***		-0.39***	-0.20*		-0.37***		-0.37***
	(1.79)		(2.70)		(2.81)	(1.64)		(2.63)		(2.74)	(1.70)		(2.93)		(2.93)
R01		0.01	0.01	0.01	0.01		-0.00	-0.00	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00
		(0.31)	(0.32)	(0.31)	(0.32)		(0.20)	(0.19)	(0.24)	(0.23)		(0.36)	(0.34)	(0.47)	(0.45)
R12		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
		(0.58)	(0.60)	(0.67)	(0.69)		(0.59)	(0.61)	(0.75)	(0.78)		(0.77)	(0.80)	(1.03)	(1.06)
BM		0.41**	0.42**	0.40**	0.40**		0.37***	0.37***	0.35***	0.35***		0.38***	0.38***	0.34***	0.34***
		(2.36)	(2.37)	(2.30)	(2.31)		(2.66)	(2.68)	(2.58)	(2.59)		(3.17)	(3.19)	(2.91)	(2.93)
ML		0.55	0.70	0.55	0.73		0.57	0.70*	0.62	0.78*		0.68*	0.82**	0.60	0.75*
		(0.98)	(1.24)	(0.94)	(1.22)		(1.35)	(1.65)	(1.37)	(1.68)		(1.86)	(2.17)	(1.55)	(1.89)
SZ		-0.00	-0.01	-0.05	-0.07		-0.02	-0.02	-0.02	-0.03		-0.02	-0.03	-0.02	-0.03
		(0.03)	(0.11)	(0.56)	(0.70)		(0.26)	(0.37)	(0.30)	(0.47)		(0.58)	(0.74)	(0.28)	(0.49)
ILLIQ				-0.02	-0.03				-0.03	-0.03				0.02	0.02
				(0.70)	(0.79)				(0.91)	(0.99)				(0.81)	(0.68)
IDVOL				0.00	0.00				0.08	0.08				0.14	0.13
				(0.02)	(0.01)				(0.58)	(0.57)				(1.23)	(1.21)
DISP				0.00	0.00				0.00	0.00				0.00	0.00
				(1.20)	(1.19)				(1.20)	(1.18)				(0.23)	(0.21)
AG				-0.26	-0.26				-0.23	-0.23				-0.26	-0.26
				(1.42)	(1.42)				(1.46)	(1.46)				(1.43)	(1.43)
UNRATED				-0.27	-0.29				-0.19	-0.21				-0.30*	-0.32**
				(1.12)	(1.20)				(1.07)	(1.16)				(1.90)	(2.00)
SPECULATIVE				-0.30	-0.34				-0.31	-0.35*				-0.32*	-0.36**
				(1.05)	(1.17)				(1.51)	(1.66)				(1.92)	(2.09)
Intercept	0.79**	0.38	0.45	1.33	1.51	0.80***	0.62	0.69	0.72	0.87	0.81***	0.72	0.79	0.60	0.75
	(2.43)	(0.26)	(0.31)	(0.80)	(0.90)	(3.90)	(0.63)	(0.69)	(0.58)	(0.70)	(5.70)	(1.07)	(1.16)	(0.60)	(0.74)
Adj. R^2	0.01%	0.11%	0.12%	0.14%	0.15%	0.01%	0.28%	0.32%	0.37%	0.41%	0.02%	0.55%	0.62%	0.83%	0.90%
Obs	58,786	58,786	58,786	58,786	58,786	58,290	58,290	58,290	58,290	58,290	57,322	57,322	57,322	57,322	57,322

Panel B

	9-month					12-month					15-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.14		-0.33***		-0.32***	-0.09		-0.29***		-0.29***	-0.07		-0.29***		-0.29***
	(1.37)		(2.92)		(2.90)	(0.96)		(2.96)		(2.94)	(0.78)		(3.06)		(3.07)
R01		0.00	0.00	-0.00	-0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
		(0.05)	(0.07)	(0.15)	(0.12)		(0.41)	(0.43)	(0.17)	(0.20)		(0.51)	(0.54)	(0.18)	(0.21)
R12		0.00	0.00	0.00	0.00		-0.00	-0.00	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00
		(0.33)	(0.36)	(0.63)	(0.67)		(0.42)	(0.39)	(0.07)	(0.03)		(0.89)	(0.86)	(0.45)	(0.40)
BM		0.39***	0.39***	0.34***	0.34***		0.33***	0.33***	0.28***	0.28***		0.33***	0.33***	0.27***	0.27***
		(3.30)	(3.32)	(2.98)	(3.00)		(3.00)	(3.03)	(2.59)	(2.61)		(3.25)	(3.28)	(2.77)	(2.79)
ML		0.70**	0.81**	0.55	0.68*		0.83***	0.94***	0.72**	0.84***		0.86***	0.97***	0.81***	0.92***
		(2.11)	(2.41)	(1.58)	(1.92)		(2.81)	(3.10)	(2.32)	(2.65)		(3.21)	(3.53)	(2.89)	(3.24)
SZ		-0.05	-0.06*	-0.05	-0.06		-0.09***	-0.10***	-0.07	-0.08*		-0.11***	-0.12***	-0.07*	-0.08**
		(1.52)	(1.69)	(0.90)	(1.09)		(2.79)	(2.95)	(1.57)	(1.77)		(3.67)	(3.81)	(1.76)	(1.96)
ILLIQ				0.03	0.02				0.02	0.02				0.02	0.02
				(1.20)	(1.04)				(0.99)	(0.88)				(0.82)	(0.71)
IDVOL				0.17*	0.16*				0.20**	0.20**				0.24***	0.24***
				(1.84)	(1.82)				(2.53)	(2.51)				(3.34)	(3.33)
DISP				-0.00	-0.00				-0.00	-0.00				-0.00	-0.00
				(0.75)	(0.80)				(1.30)	(1.36)				(1.36)	(1.42)
AG				-0.28	-0.28				-0.26	-0.26				-0.23	-0.23
				(1.63)	(1.64)				(1.63)	(1.64)				(1.62)	(1.63)
UNRATED				-0.37***	-0.39***				-0.37***	-0.39***				-0.36***	-0.37***
				(2.66)	(2.75)				(3.00)	(3.11)				(3.04)	(3.15)
SPECULATIVE				-0.34**	-0.37***				-0.38***	-0.41***				-0.44***	-0.47***
				(2.47)	(2.66)				(3.00)	(3.17)				(3.41)	(3.57)
Intercept	0.80***	1.12**	1.17**	0.99	1.12	0.78***	1.67***	1.71***	1.29*	1.40*	0.79***	1.99***	2.03***	1.25*	1.36*
	(7.00)	(1.98)	(2.08)	(1.12)	(1.26)	(7.52)	(3.19)	(3.28)	(1.65)	(1.79)	(8.01)	(4.16)	(4.26)	(1.74)	(1.90)
Adj. R^2	0.02%	0.89%	0.97%	1.45%	1.53%	0.01%	1.27%	1.36%	2.06%	2.15%	0.00%	1.77%	1.88%	2.88%	2.98%
Obs	56,183	56,183	56,183	56,183	56,183	54,974	54,974	54,974	54,974	54,974	53,707	53,707	53,707	53,707	53,707

Table A11

Panel Regressions: J=3

This table shows results from panel regressions of firm's K-month average excess returns (in percentage) on the measure AIUR as well as controls for expected returns. The values of K are 1, 3, 6, 9, 12, and 15. AIUR is constructed as the J-month moving average of residuals from regression of the logarithm of all-in-undrawn spread on a set of loan spread determinants where the regression is run with the full sample. The control variables include reversal (R01), momentum (R12), book-to-market ratio (BM), market leverage (ML), firm size (SZ), Amihud (2002) illiquidity (ILLIQ), idiosyncratic volatility (IDVOL), analyst forecast dispersion (DISP), asset growth (AG), unrated indicator (UNRATED), and speculative-grade indicator (SPECULATIVE). The detailed definitions are provided in Table 0. The sample period is from January 1994 to December 2016. *t*-statistics (based on standard errors clustered by firm and month) are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A

	1-month					3-month					6-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.32		-0.51***		-0.50**	-0.40**		-0.55***		-0.57***	-0.26*		-0.40***		-0.40***
	(1.63)		(2.58)		(2.57)	(2.38)		(3.18)		(3.24)	(1.93)		(2.92)		(2.87)
R01		0.01	0.01	0.01	0.01		-0.00	0.00	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00
		(0.35)	(0.36)	(0.35)	(0.36)		(0.01)	(0.01)	(0.03)	(0.01)		(0.23)	(0.21)	(0.30)	(0.27)
R12		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
		(1.20)	(1.22)	(1.31)	(1.33)		(0.67)	(0.70)	(0.84)	(0.89)		(0.57)	(0.60)	(0.77)	(0.81)
BM		0.53**	0.54**	0.51**	0.51**		0.49***	0.49***	0.47**	0.47**		0.36***	0.36***	0.32**	0.33**
		(2.38)	(2.40)	(2.22)	(2.23)		(2.61)	(2.62)	(2.50)	(2.51)		(2.70)	(2.72)	(2.51)	(2.53)
ML		0.65	0.83	0.76	0.96		0.34	0.54	0.35	0.58		0.59	0.73*	0.53	0.69
		(0.97)	(1.24)	(1.06)	(1.35)		(0.67)	(1.06)	(0.64)	(1.06)		(1.54)	(1.87)	(1.25)	(1.59)
SZ		-0.03	-0.04	-0.06	-0.07		-0.03	-0.04	-0.04	-0.06		-0.01	-0.02	-0.01	-0.02
		(0.35)	(0.44)	(0.53)	(0.68)		(0.49)	(0.64)	(0.52)	(0.75)		(0.23)	(0.40)	(0.18)	(0.41)
ILLIQ				0.13*	0.12*				0.02	0.01				0.04	0.03
				(1.94)	(1.88)				(0.48)	(0.32)				(1.24)	(1.11)
IDVOL				-0.04	-0.04				0.08	0.07				0.09	0.08
				(0.15)	(0.17)				(0.54)	(0.50)				(0.79)	(0.76)
DISP				0.00***	0.00***				0.00***	0.00***				0.00	0.00
				(13.32)	(13.31)				(24.03)	(23.76)				(1.03)	(0.92)
AG				-0.16	-0.16				-0.14	-0.14				-0.15	-0.15
				(1.09)	(1.10)				(1.10)	(1.11)				(0.99)	(0.99)
UNRATED				-0.18	-0.20				-0.27	-0.30				-0.26	-0.27*
				(0.59)	(0.66)				(1.26)	(1.37)				(1.56)	(1.66)
SPECULATIVE				-0.33	-0.38				-0.37	-0.42*				-0.29	-0.32*
				(1.02)	(1.16)				(1.50)	(1.71)				(1.49)	(1.68)
Intercept	0.73**	0.63	0.72	1.16	1.37	0.75***	0.78	0.88	1.00	1.23	0.79***	0.54	0.61	0.59	0.76
	(2.23)	(0.40)	(0.45)	(0.64)	(0.75)	(3.55)	(0.71)	(0.79)	(0.70)	(0.87)	(5.47)	(0.74)	(0.84)	(0.58)	(0.74)
Adj. R^2	0.01%	0.21%	0.23%	0.27%	0.29%	0.04%	0.47%	0.55%	0.55%	0.63%	0.03%	0.44%	0.52%	0.59%	0.67%
Obs	29,891	29,891	29,891	29,891	29,891	29,683	29,683	29,683	29,683	29,683	29,267	29,267	29,267	29,267	29,267

Panel B

	9-month					12-month					15-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.25**		-0.41***		-0.41***	-0.12		-0.31***		-0.31***	-0.11		-0.32***		-0.32***
	(2.20)		(3.47)		(3.44)	(1.18)		(2.94)		(2.90)	(1.18)		(3.34)		(3.31)
R01		0.00	0.00	0.00	0.00		0.00	0.01	0.00	0.00		0.00	0.00	0.00	0.00
		(0.23)	(0.26)	(0.08)	(0.12)		(0.99)	(1.02)	(0.77)	(0.81)		(1.07)	(1.11)	(0.76)	(0.80)
R12		0.00	0.00	0.00	0.00		-0.00	-0.00	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00
		(0.60)	(0.64)	(0.85)	(0.90)		(0.36)	(0.33)	(0.09)	(0.05)		(1.03)	(0.99)	(0.66)	(0.60)
BM		0.42***	0.43***	0.37***	0.38***		0.31**	0.31**	0.26**	0.26**		0.29**	0.29**	0.23**	0.23**
		(3.06)	(3.09)	(2.82)	(2.85)		(2.42)	(2.44)	(2.14)	(2.16)		(2.51)	(2.54)	(2.12)	(2.14)
ML		0.62*	0.77**	0.51	0.67*		0.87***	0.98***	0.72**	0.85**		0.92***	1.04***	0.86***	0.99***
		(1.78)	(2.16)	(1.37)	(1.78)		(2.64)	(2.93)	(2.08)	(2.41)		(3.12)	(3.45)	(2.74)	(3.10)
SZ		-0.03	-0.04	-0.03	-0.04		-0.07**	-0.08**	-0.05	-0.06		-0.11***	-0.12***	-0.07	-0.08*
		(0.84)	(1.05)	(0.52)	(0.78)		(2.00)	(2.17)	(1.14)	(1.35)		(3.53)	(3.71)	(1.58)	(1.82)
ILLIQ				0.03	0.03				0.02	0.01				0.01	0.01
				(1.44)	(1.24)				(0.78)	(0.64)				(0.54)	(0.41)
IDVOL				0.14	0.14				0.19**	0.18**				0.25***	0.25***
				(1.54)	(1.50)				(2.31)	(2.28)				(3.28)	(3.25)
DISP				0.00***	0.00***				-0.00***	-0.00***				-0.00***	-0.00***
				(3.53)	(3.39)				(7.50)	(7.65)				(6.07)	(6.23)
AG				-0.19	-0.19				-0.17	-0.17				-0.16	-0.16
				(1.23)	(1.24)				(1.26)	(1.26)				(1.26)	(1.27)
UNRATED				-0.36**	-0.38***				-0.37***	-0.39***				-0.36***	-0.37***
				(2.55)	(2.67)				(2.89)	(2.99)				(3.03)	(3.15)
SPECULATIVE				-0.38**	-0.42***				-0.36***	-0.39***				-0.46***	-0.49***
				(2.53)	(2.78)				(2.79)	(2.99)				(3.53)	(3.73)
Intercept	0.79***	0.79	0.86	0.75	0.93	0.78***	1.34**	1.39**	1.03	1.15	0.79***	1.95***	2.00***	1.12	1.26*
	(6.99)	(1.33)	(1.46)	(0.82)	(1.01)	(7.79)	(2.43)	(2.54)	(1.29)	(1.44)	(8.06)	(3.96)	(4.08)	(1.53)	(1.72)
Adj. R^2	0.05%	0.83%	0.96%	1.27%	1.41%	0.01%	1.09%	1.19%	1.73%	1.83%	0.01%	1.69%	1.82%	2.79%	2.92%
Obs	28,703	28,703	28,703	28,703	28,703	28,113	28,113	28,113	28,113	28,113	27,483	27,483	27,483	27,483	27,483

Table A12

Panel Regressions: J=12

This table shows results from panel regressions of firm's K-month average excess returns (in percentage) on the measure AIUR as well as controls for expected returns. The values of K are 1, 3, 6, 9, 12, and 15. AIUR is constructed as the J-month moving average of residuals from regression of the logarithm of all-in-undrawn spread on a set of loan spread determinants where the regression is run with the full sample. The control variables include reversal (R01), momentum (R12), book-to-market ratio (BM), market leverage (ML), firm size (SZ), Amihud (2002) illiquidity (ILLIQ), idiosyncratic volatility (IDVOL), analyst forecast dispersion (DISP), asset growth (AG), unrated indicator (UNRATED), and speculative-grade indicator (SPECULATIVE). The detailed definitions are provided in Table 0. The sample period is from January 1994 to December 2016. *t*-statistics (based on standard errors clustered by firm and month) are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A

	1-month					3-month					6-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.27**		-0.43***		-0.45***	-0.24**		-0.43***		-0.43***	-0.18*		-0.38***		-0.38***
	(2.26)		(3.39)		(3.48)	(2.26)		(3.87)		(3.90)	(1.85)		(3.74)		(3.73)
R01		0.01	0.01	0.01	0.01		0.00	0.00	0.00	0.00		-0.00	-0.00	-0.00	-0.00
		(0.80)	(0.81)	(0.79)	(0.80)		(0.16)	(0.18)	(0.08)	(0.10)		(0.39)	(0.37)	(0.58)	(0.55)
R12		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00*
		(1.06)	(1.08)	(1.20)	(1.23)		(1.10)	(1.13)	(1.36)	(1.40)		(1.26)	(1.30)	(1.61)	(1.66)
BM		0.42**	0.43**	0.40**	0.41**		0.41***	0.41***	0.38***	0.38***		0.40***	0.41***	0.36***	0.36***
		(2.36)	(2.38)	(2.31)	(2.33)		(3.25)	(3.27)	(3.15)	(3.17)		(3.16)	(3.18)	(2.96)	(2.98)
ML		0.42	0.57	0.35	0.53		0.52	0.67*	0.40	0.57		0.62**	0.76**	0.45	0.61*
		(0.85)	(1.14)	(0.72)	(1.05)		(1.41)	(1.78)	(1.06)	(1.48)		(2.00)	(2.38)	(1.40)	(1.82)
SZ		-0.04	-0.05	-0.11	-0.12		-0.07	-0.08	-0.08	-0.09		-0.09**	-0.10**	-0.08	-0.09
		(0.51)	(0.59)	(1.13)	(1.25)		(1.25)	(1.38)	(1.12)	(1.28)		(2.30)	(2.46)	(1.35)	(1.52)
ILLIQ				0.00	0.00				0.01	0.01				0.01**	0.01**
				(0.14)	(0.07)				(0.95)	(0.81)				(2.16)	(2.03)
IDVOL				0.02	0.02				0.13	0.13				0.20*	0.20*
				(0.09)	(0.08)				(0.92)	(0.90)				(1.85)	(1.83)
DISP				0.00	0.00				0.00	0.00				-0.00	-0.00
				(0.76)	(0.74)				(0.91)	(0.86)				(1.25)	(1.36)
AG				-0.30*	-0.30*				-0.32**	-0.32**				-0.34**	-0.34**
				(1.77)	(1.77)				(2.01)	(2.01)				(1.98)	(1.99)
UNRATED				-0.42*	-0.43*				-0.38**	-0.40**				-0.44***	-0.45***
				(1.88)	(1.95)				(2.33)	(2.42)				(2.92)	(3.02)
SPECULATIVE				-0.38	-0.42*				-0.35**	-0.38**				-0.38***	-0.41***
				(1.57)	(1.68)				(2.06)	(2.23)				(2.59)	(2.76)
Intercept	0.79**	0.95	1.01	2.15	2.29	0.80***	1.35	1.40	1.56	1.69	0.80***	1.62***	1.67***	1.45	1.57
	(2.48)	(0.71)	(0.75)	(1.31)	(1.39)	(3.84)	(1.48)	(1.54)	(1.23)	(1.34)	(5.31)	(2.58)	(2.67)	(1.40)	(1.51)
Adj. R^2	0.01%	0.14%	0.15%	0.17%	0.19%	0.01%	0.38%	0.42%	0.52%	0.57%	0.02%	0.74%	0.81%	1.17%	1.24%
Obs	111,217	111,217	111,217	111,217	111,217	110,032	110,032	110,032	110,032	110,032	107,960	107,960	107,960	107,960	107,960

Panel B

	9-month					12-month					15-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.13		-0.34***		-0.34***	-0.08		-0.29***		-0.29***	-0.04		-0.25***		-0.25***
	(1.49)		(3.56)		(3.58)	(0.99)		(3.24)		(3.28)	(0.51)		(2.97)		(2.98)
R01		-0.00	0.00	-0.00	-0.00		0.00	0.00	0.00	0.00		0.00	0.00	-0.00	-0.00
		(0.01)	(0.01)	(0.27)	(0.24)		(0.38)	(0.40)	(0.06)	(0.10)		(0.05)	(0.07)	(0.40)	(0.36)
R12		0.00	0.00	0.00	0.00		-0.00	-0.00	0.00	0.00		-0.00	-0.00	-0.00	-0.00
		(0.77)	(0.82)	(1.14)	(1.20)		(0.13)	(0.08)	(0.28)	(0.33)		(0.96)	(0.91)	(0.50)	(0.43)
BM		0.42***	0.43***	0.37***	0.37***		0.39***	0.39***	0.33***	0.34***		0.37***	0.37***	0.31***	0.31***
		(3.50)	(3.53)	(3.25)	(3.27)		(3.58)	(3.61)	(3.27)	(3.30)		(3.70)	(3.73)	(3.33)	(3.35)
ML		0.57**	0.69**	0.43	0.56*		0.61**	0.72***	0.53*	0.64**		0.68***	0.77***	0.61**	0.71***
		(1.98)	(2.36)	(1.43)	(1.85)		(2.33)	(2.68)	(1.90)	(2.29)		(2.83)	(3.16)	(2.41)	(2.76)
SZ		-0.11***	-0.11***	-0.10*	-0.11**		-0.12***	-0.12***	-0.10**	-0.10**		-0.12***	-0.13***	-0.08**	-0.09**
		(3.12)	(3.28)	(1.87)	(2.03)		(3.68)	(3.82)	(2.07)	(2.23)		(4.27)	(4.40)	(2.04)	(2.19)
ILLIQ				0.01	0.01				0.01	0.00				0.00	0.00
				(1.39)	(1.27)				(0.95)	(0.82)				(0.73)	(0.58)
IDVOL				0.20**	0.20**				0.22***	0.22***				0.25***	0.25***
				(2.32)	(2.30)				(3.03)	(3.02)				(3.88)	(3.87)
DISP				-0.00**	-0.00**				-0.00*	-0.00*				-0.00	-0.00
				(2.08)	(2.22)				(1.76)	(1.86)				(1.36)	(1.42)
AG				-0.37**	-0.37**				-0.35**	-0.35**				-0.33**	-0.32**
				(2.18)	(2.18)				(2.17)	(2.18)				(2.15)	(2.16)
UNRATED				-0.45***	-0.46***				-0.40***	-0.41***				-0.36***	-0.37***
				(3.36)	(3.45)				(3.35)	(3.44)				(3.31)	(3.39)
SPECULATIVE				-0.41***	-0.44***				-0.42***	-0.44***				-0.41***	-0.43***
				(3.16)	(3.33)				(3.41)	(3.56)				(3.50)	(3.63)
Intercept	0.80***	1.88***	1.92***	1.75*	1.86**	0.79***	2.02***	2.06***	1.64**	1.73**	0.81***	2.12***	2.15***	1.38**	1.46**
	(6.41)	(3.45)	(3.54)	(1.89)	(2.00)	(7.31)	(4.10)	(4.18)	(2.08)	(2.19)	(8.34)	(4.85)	(4.93)	(2.02)	(2.13)
Adj. R^2	0.01%	1.15%	1.24%	1.85%	1.94%	0.01%	1.48%	1.56%	2.41%	2.50%	0.00%	1.93%	2.01%	3.15%	3.23%
Obs	105,641	105,641	105,641	105,641	105,641	103,211	103,211	103,211	103,211	103,211	100,767	100,767	100,767	100,767	100,767

Appendix B

The results reported in this appendix are obtained when Equation (1) is estimated with 10-year rolling-window regressions. As described in the main paper, after estimating Equation (1), we aggregate the residuals into firm-month level. And AIUR of a firm in a certain month is constructed as the moving average of its residuals over the past J months.

Tables B1 through B4 show the univariate relation between AIUR and future stock returns, with J equal to 9, 6, 3, and 12, respectively. Every month, firms which borrowed loans over the past J months are sorted into quintile portfolios based on the AIUR measure and held for K months. The values of K are 1, 3, 6, 9, 12, and 15. For each K, we report the average monthly equally weighted excess returns (EW), the average monthly weighted excess returns with the facility amount scaled by total assets as the weight (VW), alphas from Fama and French (2015) five-factor model and alphas from Hou et al. (2015) four-factor model.

Tables B5 through B8 present results from Fama-MacBeth regressions of future stock returns on AIUR as well as controls for expected returns, with J equal to 9, 6, 3, and 12, respectively. The dependent variable is firm's K-month average excess returns where K takes the value of 1, 3, 6, 9, 12, and 15. The control variables include the stock return over the previous month (R01), the stock return over the 11 months preceding the previous month (R12), the log of the ratio of book value of equity to market value of equity (BM), the log of the market leverage ratio defined as book value of long-term debt divided by the sum of market value of equity and book value of long-term debt (ML), and the log of the market value of equity (SZ). In addition to Fama-MacBeth regressions, we also estimate these models with panel regressions, and the corresponding results are reported in Tables B9 through B12.

Table B1

Returns of AIUR Portfolios: J=9

This table reports the monthly excess returns or abnormal returns (in percentage) of quintile portfolios sorted on AIUR, which is constructed as the J-month moving average of residuals from 10-year rolling-window regressions of the logarithm of all-in-undrawn spread on a set of loan spread determinants. Every month, firms which borrowed loans over the past J months are sorted into quintile portfolios based on the AIUR measure and held for K months. The average monthly equally weighted excess returns (EW), the average monthly weighted excess returns with the facility amount scaled by total assets as the weight (VW), abnormal returns (alpha) from Fama and French (2015) five-factor model and Hou et al. (2015) four-factor model are presented in each panel for different values of K. The sample period is from January 1994 to December 2016. *t*-statistics for the return spread between the highest and lowest AIUR quintile portfolios are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

	AIUR						
	L	2	3	4	H	H-L	*t*--stat
Panel A: J=9, K=1							
EW	1.36	1.22	1.07	1.05	0.90	-0.46**	(2.27)
VW	1.35	1.38	1.03	0.93	0.88	-0.47	(1.52)
FF 5-factor alpha	0.23	0.01	0.01	-0.07	-0.28	-0.51**	(2.49)
HXZ 4-factor alpha	0.52	0.35	0.25	0.18	0.04	-0.48**	(2.35)
Panel B: J=9, K=3							
EW	1.17	1.08	0.90	0.96	0.67	-0.51***	(3.11)
VW	1.17	1.15	0.91	0.87	0.59	-0.58***	(2.60)
FF 5-factor alpha	0.26	0.12	0.03	-0.05	-0.21	-0.47***	(2.96)
HXZ 4-factor alpha	0.46	0.33	0.17	0.10	-0.06	-0.51***	(3.20)
Panel C: J=9, K=6							
EW	1.11	1.09	0.91	0.99	0.72	-0.39***	(2.60)
VW	1.13	1.22	0.88	0.94	0.64	-0.49**	(2.45)
FF 5-factor alpha	0.29	0.13	-0.01	-0.02	-0.16	-0.45***	(3.12)
HXZ 4-factor alpha	0.49	0.33	0.15	0.14	-0.00	-0.49***	(3.31)
Panel D: J=9, K=9							
EW	1.10	1.09	0.92	1.01	0.77	-0.33**	(2.47)
VW	1.16	1.24	0.87	0.97	0.69	-0.47**	(2.52)
FF 5-factor alpha	0.28	0.16	-0.03	-0.01	-0.13	-0.41***	(3.17)
HXZ 4-factor alpha	0.47	0.34	0.14	0.16	0.04	-0.43***	(3.23)
Panel E: J=9, K=12							
EW	1.04	1.10	0.91	0.99	0.79	-0.25*	(1.90)
VW	1.09	1.23	0.86	0.98	0.73	-0.36**	(2.04)
FF 5-factor alpha	0.22	0.18	-0.04	-0.03	-0.11	-0.33***	(2.66)
HXZ 4-factor alpha	0.39	0.36	0.14	0.15	0.07	-0.32**	(2.58)
Panel F: J=9, K=15							
EW	1.01	1.09	0.91	0.95	0.78	-0.23*	(1.80)
VW	1.04	1.17	0.86	0.96	0.75	-0.29*	(1.66)
FF 5-factor alpha	0.18	0.17	-0.05	-0.05	-0.13	-0.30**	(2.55)
HXZ 4-factor alpha	0.34	0.34	0.14	0.14	0.05	-0.29**	(2.39)

Table B2

Returns of AIUR Portfolios: J=6

This table reports the monthly excess returns or abnormal returns (in percentage) of quintile portfolios sorted on AIUR, which is constructed as the J-month moving average of residuals from 10-year rolling-window regressions of the logarithm of all-in-undrawn spread on a set of loan spread determinants. Every month, firms which borrowed loans over the past J months are sorted into quintile portfolios based on the AIUR measure and held for K months. The average monthly equally weighted excess returns (EW), the average monthly weighted excess returns with the facility amount scaled by total assets as the weight (VW), abnormal returns (alpha) from Fama and French (2015) five-factor model and Hou et al. (2015) four-factor model are presented in each panel for different values of K. The sample period is from January 1994 to December 2016. *t*-statistics for the return spread between the highest and lowest AIUR quintile portfolios are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

	AIUR						
	L	2	3	4	H	H-L	*t*--stat
Panel A: J=6, K=1							
EW	1.38	1.30	1.14	1.06	0.98	-0.41*	(1.79)
VW	1.37	1.45	1.18	0.97	0.91	-0.46	(1.20)
FF 5-factor alpha	0.21	0.14	0.02	-0.13	-0.22	-0.43**	(2.03)
HXZ 4-factor alpha	0.49	0.51	0.27	0.18	0.11	-0.38*	(1.78)
Panel B: J=6, K=3							
EW	1.09	1.19	0.90	0.98	0.76	-0.34*	(1.80)
VW	1.11	1.28	0.89	0.86	0.71	-0.40	(1.44)
FF 5-factor alpha	0.14	0.20	0.01	-0.01	-0.17	-0.31*	(1.76)
HXZ 4-factor alpha	0.32	0.41	0.15	0.14	-0.01	-0.33*	(1.85)
Panel C: J=6, K=6							
EW	1.09	1.15	0.90	1.02	0.70	-0.39**	(2.34)
VW	1.09	1.26	0.89	0.92	0.68	-0.42*	(1.85)
FF 5-factor alpha	0.21	0.14	0.01	0.04	-0.17	-0.37**	(2.28)
HXZ 4-factor alpha	0.41	0.37	0.15	0.17	-0.02	-0.43**	(2.58)
Panel D: J=6, K=9							
EW	1.11	1.11	0.89	1.00	0.73	-0.38***	(2.61)
VW	1.15	1.24	0.89	0.93	0.69	-0.46**	(2.37)
FF 5-factor alpha	0.28	0.12	-0.03	0.01	-0.16	-0.44***	(3.13)
HXZ 4-factor alpha	0.47	0.32	0.13	0.16	-0.00	-0.48***	(3.32)
Panel E: J=6, K=12							
EW	1.07	1.14	0.88	1.01	0.80	-0.27**	(2.03)
VW	1.13	1.28	0.86	0.96	0.76	-0.37**	(2.05)
FF 5-factor alpha	0.25	0.18	-0.05	-0.01	-0.11	-0.36***	(2.84)
HXZ 4-factor alpha	0.42	0.37	0.12	0.16	0.06	-0.36***	(2.84)
Panel F: J=6, K=15							
EW	1.02	1.15	0.90	0.98	0.81	-0.21	(1.64)
VW	1.06	1.24	0.88	0.96	0.79	-0.27	(1.59)
FF 5-factor alpha	0.18	0.19	-0.03	-0.03	-0.09	-0.27**	(2.23)
HXZ 4-factor alpha	0.35	0.37	0.14	0.15	0.08	-0.26**	(2.17)

Table B3

Returns of AIUR Portfolios: J=3

This table reports the monthly excess returns or abnormal returns (in percentage) of quintile portfolios sorted on AIUR, which is constructed as the J-month moving average of residuals from 10-year rolling-window regressions of the logarithm of all-in-undrawn spread on a set of loan spread determinants. Every month, firms which borrowed loans over the past J months are sorted into quintile portfolios based on the AIUR measure and held for K months. The average monthly equally weighted excess returns (EW), the average monthly weighted excess returns with the facility amount scaled by total assets as the weight (VW), abnormal returns (alpha) from Fama and French (2015) five-factor model and Hou et al. (2015) four-factor model are presented in each panel for different values of K. The sample period is from January 1994 to December 2016. *t*-statistics for the return spread between the highest and lowest AIUR quintile portfolios are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

	AIUR						
	L	2	3	4	H	H-L	*t*--stat
Panel A: J=3, K=1							
EW	1.59	0.76	1.57	0.77	0.78	-0.81***	(2.99)
VW	1.71	0.82	1.70	0.69	0.82	-0.89**	(2.13)
FF 5-factor alpha	0.23	-0.12	0.11	-0.34	-0.37	-0.60**	(2.27)
HXZ 4-factor alpha	0.51	0.09	0.39	0.08	-0.08	-0.59**	(2.22)
Panel B: J=3, K=3							
EW	1.20	1.07	1.04	0.81	0.70	-0.50**	(2.42)
VW	1.26	1.18	1.09	0.74	0.72	-0.54*	(1.72)
FF 5-factor alpha	0.18	0.17	0.02	-0.25	-0.25	-0.42**	(2.18)
HXZ 4-factor alpha	0.35	0.27	0.16	-0.01	-0.07	-0.41**	(2.12)
Panel C: J=3, K=6							
EW	1.07	1.14	0.99	0.94	0.76	-0.31*	(1.79)
VW	1.10	1.30	0.95	0.90	0.80	-0.30	(1.25)
FF 5-factor alpha	0.14	0.21	0.03	-0.13	-0.10	-0.25	(1.48)
HXZ 4-factor alpha	0.33	0.39	0.17	0.06	0.04	-0.29*	(1.73)
Panel D: J=3, K=9							
EW	1.17	1.08	0.90	1.01	0.68	-0.49***	(3.23)
VW	1.17	1.20	0.89	0.98	0.69	-0.48**	(2.41)
FF 5-factor alpha	0.25	0.14	-0.05	-0.02	-0.18	-0.43***	(2.91)
HXZ 4-factor alpha	0.45	0.34	0.12	0.15	-0.05	-0.50***	(3.32)
Panel E: J=3, K=12							
EW	1.12	1.10	0.89	0.98	0.78	-0.34***	(2.61)
VW	1.18	1.24	0.87	0.96	0.77	-0.41**	(2.27)
FF 5-factor alpha	0.27	0.18	-0.07	-0.07	-0.14	-0.42***	(3.22)
HXZ 4-factor alpha	0.45	0.36	0.10	0.12	0.02	-0.43***	(3.32)
Panel F: J=3, K=15							
EW	1.09	1.15	0.91	1.00	0.82	-0.26**	(2.16)
VW	1.13	1.27	0.89	1.00	0.81	-0.32*	(1.96)
FF 5-factor alpha	0.23	0.22	-0.06	-0.05	-0.08	-0.31***	(2.67)
HXZ 4-factor alpha	0.40	0.39	0.12	0.14	0.08	-0.32***	(2.71)

Table B4

Returns of AIUR Portfolios: J=12

This table reports the monthly excess returns or abnormal returns (in percentage) of quintile portfolios sorted on AIUR, which is constructed as the J-month moving average of residuals from 10-year rolling-window regressions of the logarithm of all-in-undrawn spread on a set of loan spread determinants. Every month, firms which borrowed loans over the past J months are sorted into quintile portfolios based on the AIUR measure and held for K months. The average monthly equally weighted excess returns (EW), the average monthly weighted excess returns with the facility amount scaled by total assets as the weight (VW), abnormal returns (alpha) from Fama and French (2015) five-factor model and Hou et al. (2015) four-factor model are presented in each panel for different values of K. The sample period is from January 1994 to December 2016. *t*-statistics for the return spread between the highest and lowest AIUR quintile portfolios are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

	AIUR						
	L	2	3	4	H	H-L	*t*--stat
Panel A: J=12, K=1							
EW	1.28	1.23	1.02	1.07	0.92	-0.36**	(2.00)
VW	1.32	1.43	0.92	1.00	0.77	-0.55**	(2.20)
FF 5-factor alpha	0.26	0.06	-0.11	-0.14	-0.22	-0.48***	(2.85)
HXZ 4-factor alpha	0.53	0.31	0.20	0.13	0.10	-0.42**	(2.54)
Panel B: J=12, K=3							
EW	1.11	1.10	0.91	0.96	0.77	-0.35**	(2.38)
VW	1.16	1.20	0.84	0.89	0.67	-0.49**	(2.44)
FF 5-factor alpha	0.30	0.15	-0.01	-0.06	-0.15	-0.46***	(3.30)
HXZ 4-factor alpha	0.49	0.32	0.18	0.10	0.03	-0.46***	(3.32)
Panel C: J=12, K=6							
EW	1.07	1.10	0.94	1.01	0.79	-0.29**	(2.10)
VW	1.13	1.24	0.88	0.98	0.68	-0.45**	(2.42)
FF 5-factor alpha	0.29	0.16	-0.00	-0.01	-0.10	-0.39***	(3.03)
HXZ 4-factor alpha	0.47	0.33	0.19	0.15	0.07	-0.39***	(3.02)
Panel D: J=12, K=9							
EW	1.05	1.08	0.92	1.00	0.80	-0.25*	(1.91)
VW	1.11	1.22	0.86	1.00	0.70	-0.41**	(2.27)
FF 5-factor alpha	0.24	0.16	-0.02	-0.02	-0.10	-0.34***	(2.75)
HXZ 4-factor alpha	0.41	0.32	0.18	0.15	0.08	-0.33***	(2.62)
Panel E: J=12, K=12							
EW	1.02	1.07	0.91	0.97	0.79	-0.22*	(1.69)
VW	1.06	1.19	0.84	0.97	0.72	-0.34*	(1.87)
FF 5-factor alpha	0.20	0.16	-0.04	-0.05	-0.11	-0.32***	(2.60)
HXZ 4-factor alpha	0.36	0.33	0.15	0.14	0.07	-0.29**	(2.33)
Panel F: J=12, K=15							
EW	0.99	1.07	0.91	0.95	0.78	-0.21	(1.59)
VW	1.02	1.15	0.85	0.96	0.76	-0.26	(1.46)
FF 5-factor alpha	0.17	0.15	-0.04	-0.06	-0.13	-0.30**	(2.53)
HXZ 4-factor alpha	0.32	0.31	0.16	0.14	0.06	-0.26**	(2.17)

Table B5

Fama-MacBeth Return Regressions: J=9

This table shows results from Fama-MacBeth regressions of firm's K-month average excess returns (in percentage) on the measure AIUR as well as controls for expected returns. The values of K are 1, 3, 6, 9, 12, and 15. AIUR is constructed as the J-month moving average of residuals from 10-year rolling-window regressions of the logarithm of all-in-undrawn spread on a set of loan spread determinants. The control variables include reversal (R01), momentum (R12), book-to-market ratio (BM), market leverage (ML), firm size (SZ), Amihud (2002) illiquidity (ILLIQ), idiosyncratic volatility (IDVOL), analyst forecast dispersion (DISP), asset growth (AG), unrated indicator (UNRATED), and speculative-grade indicator (SPECULATIVE). The detailed definitions are provided in Table 0. The sample period is from January 1994 to December 2016. *t*-statistics (based on Newey-West standard errors) are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A

	1-month					3-month					6-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.48***		-0.39***		-0.34***	-0.43***		-0.36***		-0.33***	-0.26***		-0.21**		-0.21***
	(3.81)		(3.51)		(3.19)	(3.75)		(3.68)		(3.69)	(2.87)		(2.50)		(2.72)
R01		-0.02**	-0.02**	-0.02**	-0.02**		-0.01	-0.01	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00
		(2.32)	(2.32)	(2.29)	(2.25)		(1.03)	(0.98)	(0.93)	(0.86)		(0.33)	(0.28)	(0.20)	(0.12)
R12		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00		-0.00	-0.00	0.00	0.00
		(0.57)	(0.60)	(0.98)	(1.02)		(0.35)	(0.36)	(0.92)	(0.93)		(0.03)	(0.02)	(0.36)	(0.38)
BM		0.23**	0.23**	0.24**	0.24**		0.16*	0.16*	0.16*	0.16*		0.06	0.06	0.03	0.03
		(2.02)	(1.98)	(2.08)	(2.07)		(1.70)	(1.71)	(1.66)	(1.69)		(0.77)	(0.77)	(0.38)	(0.43)
ML		-0.19	-0.08	0.21	0.32		-0.19	-0.09	0.01	0.11		-0.04	0.01	0.01	0.07
		(0.44)	(0.18)	(0.52)	(0.79)		(0.52)	(0.25)	(0.02)	(0.32)		(0.15)	(0.05)	(0.02)	(0.25)
SZ		-0.02	-0.04	-0.02	-0.03		-0.03	-0.05	-0.05	-0.06		-0.05	-0.06	-0.07	-0.08*
		(0.29)	(0.56)	(0.36)	(0.58)		(0.59)	(0.86)	(0.96)	(1.20)		(1.29)	(1.59)	(1.64)	(1.89)
ILLIQ				4.31	3.00				-3.50	-3.72				0.94	0.84
				(0.84)	(0.73)				(1.10)	(1.12)				(1.00)	(0.91)
IDVOL				-0.12	-0.11				-0.08	-0.08				-0.04	-0.04
				(1.07)	(1.01)				(0.95)	(0.93)				(0.58)	(0.56)
DISP				-0.11*	-0.10*				-0.07*	-0.07				-0.04	-0.03
				(1.85)	(1.80)				(1.76)	(1.63)				(1.31)	(1.12)
AG				-0.49***	-0.48***				-0.55***	-0.54***				-0.66***	-0.65***
				(2.70)	(2.65)				(3.50)	(3.46)				(5.81)	(5.78)
SPECULATIVE				-0.16	-0.17				-0.15	-0.16				-0.17*	-0.18*
				(0.93)	(0.97)				(1.10)	(1.21)				(1.75)	(1.86)
UNRATED				0.11	0.11				-0.03	-0.03				-0.16*	-0.16*
				(0.81)	(0.83)				(0.29)	(0.28)				(1.74)	(1.74)
Intercept	0.94**	0.58	0.78	0.89	1.01	0.93***	0.88	1.04	1.45	1.57*	0.94***	1.24*	1.38**	1.74**	1.86***
	(2.47)	(0.53)	(0.72)	(0.90)	(1.03)	(2.72)	(0.95)	(1.14)	(1.62)	(1.79)	(3.39)	(1.77)	(2.00)	(2.43)	(2.62)
Adj. R^2	0.12%	6.66%	6.70%	9.76%	9.79%	0.22%	6.79%	6.87%	10.03%	10.06%	0.20%	6.43%	6.52%	10.00%	10.03%
Obs	86,056	86,056	86,056	86,056	86,056	85,222	85,222	85,222	85,222	85,222	83,696	83,696	83,696	83,696	83,696

Panel B

	9-month					12-month					15-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.16**		-0.13*		-0.13**	-0.11		-0.12**		-0.13**	-0.11*		-0.15***		-0.17***
	(2.20)		(1.91)		(2.13)	(1.60)		(2.07)		(2.53)	(1.65)		(2.77)		(3.37)
R01		0.00	0.00	0.00	0.00		0.00*	0.00*	0.00*	0.00*		0.00	0.00	0.00	0.00
		(0.80)	(0.86)	(0.86)	(0.95)		(1.71)	(1.74)	(1.75)	(1.80)		(1.21)	(1.26)	(1.29)	(1.35)
R12		-0.00	-0.00	0.00	0.00		-0.00	-0.00	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00
		(0.45)	(0.42)	(0.01)	(0.04)		(0.91)	(0.89)	(0.48)	(0.46)		(1.22)	(1.22)	(0.80)	(0.79)
BM		0.02	0.03	-0.02	-0.01		0.02	0.02	-0.02	-0.02		0.07	0.07	0.02	0.03
		(0.37)	(0.38)	(0.27)	(0.21)		(0.37)	(0.38)	(0.31)	(0.29)		(1.18)	(1.17)	(0.46)	(0.48)
ML		0.10	0.14	0.11	0.15		0.17	0.20	0.16	0.20		0.18	0.22	0.18	0.23
		(0.38)	(0.50)	(0.43)	(0.57)		(0.73)	(0.86)	(0.74)	(0.90)		(0.90)	(1.11)	(0.98)	(1.23)
SZ		-0.07**	-0.08**	-0.08**	-0.09***		-0.09***	-0.09***	-0.09***	-0.10***		-0.09***	-0.09***	-0.10***	-0.10***
		(2.03)	(2.25)	(2.56)	(2.78)		(2.64)	(2.81)	(3.20)	(3.40)		(2.96)	(3.17)	(3.38)	(3.64)
ILLIQ				0.72	0.61				0.20	0.11				-0.29	-0.40
				(0.84)	(0.72)				(0.38)	(0.22)				(0.58)	(0.76)
IDVOL				0.01	0.01				0.03	0.03				0.05	0.05
				(0.21)	(0.23)				(0.59)	(0.66)				(1.00)	(1.08)
DISP				-0.00	0.00				0.02	0.02				0.02	0.02
				(0.15)	(0.03)				(0.72)	(0.81)				(0.96)	(1.07)
AG				-0.69***	-0.69***				-0.66***	-0.66***				-0.61***	-0.61***
				(7.24)	(7.21)				(8.12)	(8.15)				(8.16)	(8.21)
SPECULATIVE				-0.23***	-0.25***				-0.23***	-0.26***				-0.26***	-0.29***
				(2.84)	(3.04)				(3.56)	(3.94)				(4.54)	(4.98)
UNRATED				-0.24***	-0.25***				-0.27***	-0.29***				-0.23***	-0.26***
				(2.96)	(3.13)				(3.64)	(4.00)				(4.11)	(4.56)
Intercept	0.95***	1.56***	1.66***	1.96***	2.06***	0.95***	1.79***	1.85***	2.12***	2.20***	0.93***	1.83***	1.88***	2.10***	2.19***
	(4.22)	(2.67)	(2.84)	(3.40)	(3.57)	(4.91)	(3.39)	(3.53)	(4.12)	(4.29)	(5.48)	(3.75)	(3.92)	(4.31)	(4.52)
Adj. R^2	0.15%	6.94%	7.03%	10.51%	10.57%	0.21%	7.16%	7.24%	10.64%	10.68%	0.31%	6.99%	7.11%	10.44%	10.54%
Obs	81,965	81,965	81,965	81,965	81,965	80,145	80,145	80,145	801,45	80,145	78,239	78,239	78,239	78,239	78,239

Table B6

Fama-MacBeth Return Regressions: J=6

This table shows results from Fama-MacBeth regressions of firm's K-month average excess returns (in percentage) on the measure AIUR as well as controls for expected returns. The values of K are 1, 3, 6, 9, 12, and 15. AIUR is constructed as the J-month moving average of residuals from 10-year rolling-window regressions of the logarithm of all-in-undrawn spread on a set of loan spread determinants. The control variables include reversal (R01), momentum (R12), book-to-market ratio (BM), market leverage (ML), firm size (SZ), Amihud (2002) illiquidity (ILLIQ), idiosyncratic volatility (IDVOL), analyst forecast dispersion (DISP), asset growth (AG), unrated indicator (UNRATED), and speculative-grade indicator (SPECULATIVE). The detailed definitions are provided in Table 0. The sample period is from January 1994 to December 2016. *t*-statistics (based on Newey-West standard errors) are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A

	1-month					3-month					6-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.45***		-0.41***		-0.39***	-0.36***		-0.34***		-0.30***	-0.31***		-0.28***		-0.25***
	(3.01)		(2.97)		(2.94)	(2.89)		(2.99)		(2.66)	(3.15)		(2.99)		(2.90)
R01		-0.02**	-0.02**	-0.02**	-0.02**		-0.01	-0.01	-0.01	-0.01		-0.00	-0.00	-0.00	-0.00
		(2.48)	(2.43)	(2.44)	(2.34)		(1.18)	(1.11)	(1.19)	(1.09)		(0.23)	(0.18)	(0.13)	(0.05)
R12		0.00	0.00	0.00	0.00		-0.00	-0.00	0.00	0.00		-0.00	-0.00	-0.00	-0.00
		(0.08)	(0.16)	(0.34)	(0.40)		(0.06)	(0.03)	(0.40)	(0.43)		(0.48)	(0.46)	(0.23)	(0.21)
BM		0.15	0.16	0.19	0.20		0.09	0.09	0.10	0.10		0.05	0.05	0.02	0.03
		(1.05)	(1.12)	(1.41)	(1.46)		(0.83)	(0.83)	(0.92)	(0.92)		(0.64)	(0.60)	(0.27)	(0.30)
ML		-0.41	-0.31	-0.05	0.07		-0.29	-0.19	-0.01	0.10		-0.21	-0.13	-0.05	0.03
		(0.92)	(0.68)	(0.12)	(0.15)		(0.83)	(0.54)	(0.04)	(0.26)		(0.70)	(0.43)	(0.19)	(0.09)
SZ		0.01	-0.01	-0.05	-0.07		-0.01	-0.02	-0.04	-0.05		-0.03	-0.04	-0.04	-0.05
		(0.10)	(0.16)	(0.64)	(0.83)		(0.16)	(0.42)	(0.61)	(0.83)		(0.69)	(1.04)	(0.86)	(1.10)
ILLIQ				-6.64	-7.85				-4.62	-5.27*				-3.42	-3.67
				(0.69)	(0.79)				(1.64)	(1.71)				(0.84)	(0.86)
IDVOL				-0.23**	-0.21**				-0.12	-0.12				-0.05	-0.05
				(2.09)	(1.97)				(1.30)	(1.29)				(0.68)	(0.66)
DISP				-0.06	-0.06				-0.09	-0.09				-0.07	-0.06
				(0.67)	(0.62)				(1.14)	(1.08)				(1.19)	(1.09)
AG				-0.51**	-0.48**				-0.47***	-0.45***				-0.70***	-0.69***
				(2.56)	(2.44)				(2.71)	(2.61)				(5.33)	(5.36)
UNRATED				0.08	0.06				0.04	0.05				-0.08	-0.08
				(0.49)	(0.38)				(0.37)	(0.40)				(0.93)	(0.84)
SPECULATIVE				-0.09	-0.13				-0.06	-0.07				-0.11	-0.12
				(0.46)	(0.61)				(0.41)	(0.46)				(0.94)	(0.95)
Intercept	0.91**	0.22	0.45	1.58	1.74	0.92***	0.54	0.72	1.30	1.45	0.93***	0.91	1.09	1.38*	1.49*
	(2.34)	(0.18)	(0.36)	(1.22)	(1.34)	(2.61)	(0.52)	(0.71)	(1.25)	(1.42)	(3.29)	(1.26)	(1.53)	(1.74)	(1.92)
Adj. R^2	0.14%	6.84%	6.90%	10.63%	10.70%	0.24%	7.15%	7.22%	10.90%	10.93%	0.15%	6.80%	6.87%	11.17%	11.20%
Obs	58,786	58,786	58,786	58,786	58,786	58,290	58,290	58,290	58,290	58,290	57,322	57,322	57,322	57,322	57,322

Panel B

	9-month					12-month					15-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.19**		-0.16**		-0.16**	-0.11		-0.12*		-0.13**	-0.10		-0.15***		-0.17***
	(2.31)		(1.98)		(2.03)	(1.56)		(1.87)		(2.09)	(1.37)		(2.65)		(3.00)
R01		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
		(0.57)	(0.64)	(0.47)	(0.54)		(1.31)	(1.37)	(1.18)	(1.25)		(1.13)	(1.20)	(0.97)	(1.04)
R12		-0.00	-0.00	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00		-0.00	-0.00*	-0.00	-0.00
		(0.72)	(0.69)	(0.39)	(0.36)		(1.31)	(1.29)	(1.05)	(1.01)		(1.65)	(1.66)	(1.42)	(1.42)
BM		0.02	0.02	-0.02	-0.02		-0.02	-0.02	-0.07	-0.06		0.04	0.04	-0.01	-0.01
		(0.26)	(0.23)	(0.28)	(0.23)		(0.27)	(0.27)	(0.98)	(0.93)		(0.66)	(0.62)	(0.16)	(0.15)
ML		-0.05	-0.01	-0.00	0.04		0.13	0.16	0.15	0.17		0.21	0.25	0.18	0.22
		(0.18)	(0.03)	(0.00)	(0.15)		(0.54)	(0.64)	(0.61)	(0.70)		(1.01)	(1.19)	(0.91)	(1.08)
SZ		-0.05	-0.06*	-0.06*	-0.07**		-0.07**	-0.08**	-0.08**	-0.08***		-0.08***	-0.09***	-0.08***	-0.09***
		(1.35)	(1.73)	(1.68)	(2.00)		(2.10)	(2.35)	(2.47)	(2.71)		(2.61)	(2.83)	(2.62)	(2.91)
ILLIQ				1.41	1.24				1.04	0.88				0.64	0.38
				(0.85)	(0.79)				(0.95)	(0.85)				(1.21)	(0.68)
IDVOL				-0.02	-0.02				0.01	0.02				0.05	0.05
				(0.35)	(0.33)				(0.27)	(0.34)				(1.11)	(1.18)
DISP				-0.05	-0.05				-0.01	-0.01				-0.01	-0.00
				(1.39)	(1.27)				(0.31)	(0.25)				(0.18)	(0.09)
AG				-0.77***	-0.77***				-0.71***	-0.71***				-0.65***	-0.65***
				(6.84)	(6.90)				(7.17)	(7.21)				(7.43)	(7.47)
UNRATED				-0.18**	-0.19**				-0.25***	-0.27***				-0.24***	-0.26***
				(1.98)	(2.02)				(2.76)	(3.02)				(3.31)	(3.70)
SPECULATIVE				-0.18*	-0.19*				-0.21***	-0.23***				-0.24***	-0.27***
				(1.90)	(1.95)				(2.98)	(3.18)				(3.74)	(4.13)
Intercept	0.94***	1.22**	1.37**	1.68***	1.81***	0.95***	1.57***	1.67***	1.91***	2.02***	0.95***	1.74***	1.81***	1.93***	2.05***
	(4.08)	(2.10)	(2.41)	(2.80)	(3.04)	(4.80)	(2.92)	(3.13)	(3.57)	(3.78)	(5.41)	(3.43)	(3.62)	(3.62)	(3.87)
Adj. R^2	0.15%	7.22%	7.37%	11.53%	11.65%	0.11%	7.58%	7.64%	11.70%	11.77%	0.20%	7.62%	7.68%	11.72%	11.78%
Obs	56,183	56,183	56,183	56,183	56,183	54,974	54,974	54,974	54,974	54,974	53,707	53,707	53,707	53,707	53,707

Table B7

Fama-MacBeth Return Regressions: J=3

This table shows results from Fama-MacBeth regressions of firm's K-month average excess returns (in percentage) on the measure AIUR as well as controls for expected returns. The values of K are 1, 3, 6, 9, 12, and 15. AIUR is constructed as the J-month moving average of residuals from 10-year rolling-window regressions of the logarithm of all-in-undrawn spread on a set of loan spread determinants. The control variables include reversal (R01), momentum (R12), book-to-market ratio (BM), market leverage (ML), firm size (SZ), Amihud (2002) illiquidity (ILLIQ), idiosyncratic volatility (IDVOL), analyst forecast dispersion (DISP), asset growth (AG), unrated indicator (UNRATED), and speculative-grade indicator (SPECULATIVE). The detailed definitions are provided in Table 0. The sample period is from January 1994 to December 2016. *t*-statistics (based on Newey-West standard errors) are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A

	1-month					3-month					6-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.47***		-0.44**		-0.39**	-0.59***		-0.63***		-0.60***	-0.38***		-0.34***		-0.30**
	(2.72)		(2.40)		(2.44)	(4.09)		(4.36)		(4.05)	(3.54)		(3.05)		(2.52)
R01		-0.02**	-0.02**	-0.02**	-0.02*		-0.01	-0.00	-0.01	-0.01		-0.00	-0.00	-0.00	-0.00
		(2.20)	(1.98)	(2.04)	(1.80)		(0.81)	(0.71)	(1.08)	(0.98)		(0.15)	(0.13)	(0.59)	(0.62)
R12		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00		-0.00	-0.00	-0.00	-0.00
		(0.66)	(0.90)	(0.20)	(0.59)		(0.35)	(0.46)	(0.40)	(0.56)		(0.41)	(0.40)	(0.40)	(0.38)
BM		0.28	0.27	0.10	0.11		0.21	0.21	0.12	0.12		0.10	0.09	-0.01	-0.01
		(1.60)	(1.61)	(0.56)	(0.59)		(1.46)	(1.47)	(0.82)	(0.84)		(0.89)	(0.86)	(0.06)	(0.09)
ML		-0.34	-0.20	-0.09	0.11		-0.45	-0.23	-0.43	-0.16		-0.28	-0.17	-0.22	-0.10
		(0.54)	(0.30)	(0.13)	(0.15)		(0.97)	(0.47)	(0.93)	(0.34)		(0.88)	(0.49)	(0.72)	(0.32)
SZ		0.03	-0.00	0.01	0.01		0.01	-0.00	-0.03	-0.06		-0.01	-0.02	-0.03	-0.04
		(0.32)	(0.03)	(0.13)	(0.07)		(0.21)	(0.07)	(0.43)	(0.80)		(0.25)	(0.42)	(0.53)	(0.70)
ILLIQ				14.33	11.28				1.50	-0.58				1.55	1.65
				(1.03)	(0.85)				(0.18)	(0.07)				(0.25)	(0.27)
IDVOL				-0.13	-0.10				-0.13	-0.12				-0.06	-0.05
				(1.00)	(0.76)				(1.20)	(1.07)				(0.64)	(0.62)
DISP				0.01	0.05				-0.05	-0.02				-0.07	-0.04
				(0.03)	(0.19)				(0.34)	(0.10)				(0.51)	(0.28)
AG				-0.59*	-0.59*				-0.69***	-0.63***				-0.80***	-0.80***
				(1.82)	(1.75)				(2.90)	(2.61)				(4.12)	(4.08)
UNRATED				0.03	0.06				-0.06	-0.07				-0.10	-0.10
				(0.12)	(0.20)				(0.34)	(0.34)				(0.79)	(0.79)
SPECULATIVE				-0.23	-0.27				-0.08	-0.13				-0.08	-0.10
				(0.83)	(0.98)				(0.39)	(0.65)				(0.59)	(0.70)
Intercept	0.88**	-0.15	0.17	0.56	0.52	0.89**	0.16	0.36	1.38	1.66	0.91***	0.60	0.68	1.26	1.36
	(2.31)	(0.11)	(0.13)	(0.34)	(0.31)	(2.49)	(0.15)	(0.33)	(1.07)	(1.30)	(3.14)	(0.76)	(0.87)	(1.34)	(1.45)
Adj. R^2	0.01%	7.45%	7.46%	12.64%	12.56%	0.19%	8.72%	8.93%	13.73%	13.88%	0.10%	7.61%	7.69%	13.74%	13.87%
Obs	29,891	29,891	29,891	29,891	29,891	29,683	29,683	29,683	29,683	29,683	29,267	29,267	29,267	29,267	29,267

Panel B

	9-month					12-month					15-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.37***		-0.33***		-0.31***	-0.19**		-0.18**		-0.18**	-0.16**		-0.22***		-0.23***
	(3.94)		(3.27)		(3.11)	(2.40)		(2.32)		(2.14)	(2.28)		(3.57)		(3.60)
R01		0.00	0.00	0.00	0.00		0.01*	0.01**	0.00	0.00		0.00*	0.00*	0.00	0.00
		(0.72)	(0.73)	(0.26)	(0.25)		(1.91)	(1.98)	(1.27)	(1.33)		(1.67)	(1.72)	(0.91)	(0.97)
R12		-0.00	-0.00	-0.00	0.00		-0.00	-0.00	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00
		(0.45)	(0.44)	(0.02)	(0.01)		(0.97)	(0.96)	(0.65)	(0.59)		(1.59)	(1.61)	(1.24)	(1.21)
BM		0.10	0.09	0.02	0.01		0.04	0.04	-0.03	-0.03		0.06	0.05	-0.03	-0.04
		(1.15)	(1.07)	(0.17)	(0.14)		(0.57)	(0.51)	(0.31)	(0.28)		(0.76)	(0.68)	(0.40)	(0.43)
ML		-0.22	-0.14	-0.29	-0.19		-0.06	-0.02	-0.08	-0.03		0.10	0.16	0.01	0.08
		(0.75)	(0.46)	(1.00)	(0.63)		(0.20)	(0.09)	(0.28)	(0.09)		(0.44)	(0.66)	(0.06)	(0.32)
SZ		-0.02	-0.03	-0.03	-0.04		-0.04	-0.05	-0.04	-0.05		-0.07**	-0.08**	-0.06*	-0.07**
		(0.47)	(0.79)	(0.63)	(1.07)		(1.12)	(1.44)	(1.18)	(1.59)		(2.09)	(2.35)	(1.70)	(2.20)
ILLIQ				2.70	2.36				6.20**	6.10**				5.41**	5.21**
				(0.61)	(0.52)				(2.01)	(1.97)				(2.27)	(2.30)
IDVOL				-0.02	-0.02				-0.01	0.00				0.06	0.07
				(0.31)	(0.26)				(0.10)	(0.01)				(1.11)	(1.16)
DISP				0.00	0.04				-0.06	-0.04				0.00	0.02
				(0.03)	(0.31)				(0.93)	(0.68)				(0.06)	(0.32)
AG				-0.91***	-0.92***				-0.82***	-0.83***				-0.74***	-0.74***
				(5.58)	(5.63)				(6.17)	(6.19)				(6.11)	(6.02)
UNRATED				-0.20*	-0.21*				-0.25**	-0.27**				-0.28***	-0.32***
				(1.70)	(1.74)				(2.10)	(2.27)				(2.84)	(3.25)
SPECULATIVE				-0.15	-0.18				-0.19*	-0.21**				-0.24***	-0.28***
				(1.23)	(1.42)				(1.92)	(2.07)				(3.12)	(3.56)
Intercept	0.92***	0.78	0.93	1.25*	1.48**	0.93***	1.12**	1.27**	1.41**	1.58***	0.96***	1.59***	1.70***	1.56***	1.77***
	(3.90)	(1.22)	(1.48)	(1.75)	(2.09)	(4.61)	(1.98)	(2.25)	(2.44)	(2.73)	(5.26)	(2.92)	(3.13)	(2.77)	(3.20)
Adj. R^2	0.14%	7.97%	8.17%	14.14%	14.37%	0.06%	8.45%	8.52%	14.62%	14.86%	-0.06%	8.87%	8.76%	14.73%	14.73%
Obs	28,703	28,703	28,703	28,703	28,703	28,113	28,113	28,113	28,113	28,113	27,483	27,483	27,483	27,483	27,483

Table B8

Fama-MacBeth Return Regressions: J=12

This table shows results from Fama-MacBeth regressions of firm's K-month average excess returns (in percentage) on the measure AIUR as well as controls for expected returns. The values of K are 1, 3, 6, 9, 12, and 15. AIUR is constructed as the J-month moving average of residuals from 10-year rolling-window regressions of the logarithm of all-in-undrawn spread on a set of loan spread determinants. The control variables include reversal (R01), momentum (R12), book-to-market ratio (BM), market leverage (ML), firm size (SZ), Amihud (2002) illiquidity (ILLIQ), idiosyncratic volatility (IDVOL), analyst forecast dispersion (DISP), asset growth (AG), unrated indicator (UNRATED), and speculative-grade indicator (SPECULATIVE). The detailed definitions are provided in Table 0. The sample period is from January 1994 to December 2016. *t*-statistics (based on Newey-West standard errors) are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A

	1-month					3-month					6-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.37***		-0.30***		-0.29***	-0.31***		-0.27***		-0.26***	-0.19**		-0.17**		-0.18***
	(3.06)		(2.95)		(2.98)	(2.86)		(3.03)		(3.19)	(2.17)		(2.36)		(2.67)
R01		-0.01**	-0.01**	-0.01**	-0.01**		-0.00	-0.00	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00
		(1.99)	(1.98)	(2.07)	(2.04)		(0.62)	(0.57)	(0.74)	(0.66)		(0.28)	(0.23)	(0.22)	(0.13)
R12		0.00	0.00	0.01**	0.01**		0.00	0.00	0.00	0.00*		0.00	0.00	0.00	0.00
		(1.60)	(1.62)	(2.25)	(2.26)		(0.98)	(1.00)	(1.64)	(1.68)		(0.36)	(0.40)	(0.91)	(0.97)
BM		0.27***	0.27***	0.29***	0.29***		0.16**	0.16**	0.16**	0.16**		0.05	0.05	0.02	0.02
		(2.83)	(2.84)	(3.05)	(3.05)		(2.05)	(2.10)	(1.99)	(2.04)		(0.72)	(0.75)	(0.28)	(0.33)
ML		-0.26	-0.17	-0.09	0.00		-0.11	-0.03	-0.05	0.04		0.06	0.11	0.06	0.13
		(0.62)	(0.40)	(0.24)	(0.01)		(0.30)	(0.08)	(0.17)	(0.11)		(0.21)	(0.39)	(0.23)	(0.47)
SZ		-0.04	-0.06	-0.09	-0.11*		-0.06	-0.07	-0.09*	-0.10**		-0.08*	-0.09**	-0.10**	-0.11***
		(0.71)	(0.95)	(1.64)	(1.89)		(1.11)	(1.35)	(1.80)	(2.06)		(1.87)	(2.08)	(2.51)	(2.72)
ILLIQ				0.40	-0.09				-1.63	-1.65				-0.14	-0.20
				(0.16)	(0.05)				(1.52)	(1.51)				(0.21)	(0.29)
IDVOL				-0.14	-0.14				-0.08	-0.07				-0.03	-0.02
				(1.43)	(1.39)				(0.91)	(0.90)				(0.39)	(0.36)
DISP				-0.03	-0.03				-0.04*	-0.04*				-0.00	0.00
				(1.21)	(0.94)				(1.94)	(1.70)				(0.06)	(0.16)
AG				-0.44***	-0.43***				-0.51***	-0.50***				-0.60***	-0.59***
				(3.01)	(2.91)				(3.90)	(3.82)				(6.07)	(6.01)
UNRATED				-0.09	-0.10				-0.13	-0.13				-0.22**	-0.23***
				(0.67)	(0.76)				(1.19)	(1.19)				(2.54)	(2.66)
SPECULATIVE				-0.20	-0.22				-0.15	-0.16				-0.19**	-0.21**
				(1.31)	(1.48)				(1.31)	(1.42)				(2.20)	(2.38)
Intercept	0.92**	1.01	1.18	2.11**	2.27**	0.94***	1.27	1.42	2.02**	2.17**	0.96***	1.62**	1.74**	2.12***	2.25***
	(2.48)	(0.93)	(1.10)	(2.20)	(2.37)	(2.77)	(1.37)	(1.54)	(2.38)	(2.55)	(3.50)	(2.24)	(2.40)	(3.18)	(3.33)
Adj. R^2	0.12%	6.06%	6.10%	8.75%	8.79%	0.19%	6.38%	6.43%	9.13%	9.16%	0.17%	6.52%	6.59%	9.63%	9.69%
Obs	111,217	111,217	111,217	111,217	111,217	110,032	110,032	110,032	110,032	110,032	107,960	107,960	107,960	107,960	107,960

Panel B

	9-month					12-month					15-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.12*		-0.12**		-0.14**	-0.11		-0.13**		-0.15***	-0.09		-0.14***		-0.16***
	(1.67)		(2.05)		(2.40)	(1.51)		(2.42)		(3.11)	(1.32)		(2.80)		(3.52)
R01		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
		(0.47)	(0.52)	(0.46)	(0.53)		(1.44)	(1.48)	(1.41)	(1.46)		(0.92)	(0.96)	(1.00)	(1.05)
R12		0.00	0.00	0.00	0.00		-0.00	-0.00	0.00	0.00		-0.00	-0.00	-0.00	-0.00
		(0.00)	(0.04)	(0.51)	(0.57)		(0.43)	(0.39)	(0.08)	(0.13)		(0.72)	(0.70)	(0.09)	(0.06)
BM		0.04	0.04	0.00	0.00		0.04	0.04	0.01	0.01		0.06	0.06	0.03	0.03
		(0.68)	(0.70)	(0.03)	(0.06)		(0.71)	(0.72)	(0.21)	(0.22)		(1.09)	(1.08)	(0.67)	(0.66)
ML		0.12	0.16	0.10	0.15		0.14	0.18	0.11	0.16		0.14	0.18	0.11	0.17
		(0.46)	(0.61)	(0.41)	(0.61)		(0.63)	(0.81)	(0.53)	(0.77)		(0.72)	(0.96)	(0.64)	(0.94)
SZ		-0.09**	-0.10***	-0.11***	-0.11***		-0.09***	-0.10***	-0.10***	-0.11***		-0.10***	-0.10***	-0.10***	-0.11***
		(2.48)	(2.64)	(3.22)	(3.37)		(2.88)	(3.04)	(3.49)	(3.66)		(3.34)	(3.52)	(3.66)	(3.84)
ILLIQ				-0.01	-0.06				-0.16	-0.20				0.08	0.04
				(0.02)	(0.11)				(0.40)	(0.50)				(0.31)	(0.16)
IDVOL				0.00	0.00				0.02	0.02				0.04	0.04
				(0.01)	(0.04)				(0.35)	(0.42)				(0.76)	(0.84)
DISP				0.01	0.01				0.02	0.02				0.02	0.02
				(0.48)	(0.65)				(0.97)	(1.13)				(1.11)	(1.31)
AG				-0.66***	-0.66***				-0.63***	-0.63***				-0.60***	-0.60***
				(7.76)	(7.74)				(8.32)	(8.30)				(8.45)	(8.44)
UNRATED				-0.27***	-0.28***				-0.26***	-0.28***				-0.21***	-0.23***
				(3.53)	(3.80)				(3.72)	(4.08)				(3.99)	(4.36)
SPECULATIVE				-0.22***	-0.24***				-0.23***	-0.25***				-0.22***	-0.25***
				(2.96)	(3.24)				(3.60)	(3.99)				(4.23)	(4.63)
Intercept	0.95***	1.82***	1.89***	2.29***	2.39***	0.93***	1.90***	1.95***	2.24***	2.31***	0.92***	1.98***	2.02***	2.18***	2.24***
	(4.25)	(3.03)	(3.16)	(3.99)	(4.11)	(4.88)	(3.57)	(3.69)	(4.36)	(4.49)	(5.51)	(4.13)	(4.27)	(4.57)	(4.71)
Adj. R^2	0.18%	6.98%	7.07%	10.02%	10.08%	0.27%	7.01%	7.10%	10.24%	10.30%	0.31%	6.79%	6.88%	10.13%	10.20%
Obs	105,641	105,641	105,641	105,641	105,641	103,211	103,211	103,211	103,211	103,211	100,767	100,767	100,767	100,767	100,767

Table B9

Panel Regressions: J=9

This table shows results from panel regressions of firm's K-month average excess returns (in percentage) on the measure AIUR as well as controls for expected returns. The values of K are 1, 3, 6, 9, 12, and 15. AIUR is constructed as the J-month moving average of residuals from 10-year rolling-window regressions of the logarithm of all-in-undrawn spread on a set of loan spread determinants. The control variables include reversal (R01), momentum (R12), book-to-market ratio (BM), market leverage (ML), firm size (SZ), Amihud (2002) illiquidity (ILLIQ), idiosyncratic volatility (IDVOL), analyst forecast dispersion (DISP), asset growth (AG), unrated indicator (UNRATED), and speculative-grade indicator (SPECULATIVE). The detailed definitions are provided in Table 0. The sample period is from January 1994 to December 2016. *t*-statistics (based on standard errors clustered by firm and month) are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A

	1-month					3-month					6-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.43***		-0.59***		-0.60***	-0.34***		-0.52***		-0.52***	-0.21*		-0.39***		-0.38***
	(3.38)		(4.59)		(4.55)	(2.91)		(4.21)		(4.21)	(1.93)		(3.47)		(3.43)
R01		0.01	0.01	0.01	0.01		-0.00	0.00	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00
		(0.65)	(0.66)	(0.62)	(0.64)		(0.01)	(0.00)	(0.09)	(0.07)		(0.42)	(0.40)	(0.59)	(0.57)
R12		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
		(1.13)	(1.15)	(1.28)	(1.31)		(1.08)	(1.12)	(1.34)	(1.39)		(1.22)	(1.26)	(1.55)	(1.60)
BM		0.46**	0.47**	0.44**	0.44**		0.41***	0.41***	0.38***	0.38***		0.40***	0.40***	0.35***	0.35***
		(2.51)	(2.53)	(2.43)	(2.45)		(3.35)	(3.38)	(3.20)	(3.22)		(3.38)	(3.40)	(3.13)	(3.14)
ML		0.51	0.72	0.55	0.77		0.55	0.73*	0.52	0.72*		0.62*	0.75**	0.45	0.59*
		(0.97)	(1.33)	(1.04)	(1.42)		(1.42)	(1.83)	(1.30)	(1.74)		(1.86)	(2.21)	(1.31)	(1.68)
SZ		-0.01	-0.02	-0.03	-0.05		-0.04	-0.05	-0.03	-0.05		-0.05	-0.06	-0.04	-0.05
		(0.14)	(0.27)	(0.35)	(0.53)		(0.65)	(0.82)	(0.44)	(0.64)		(1.31)	(1.50)	(0.72)	(0.91)
ILLIQ				-0.01	-0.01				0.00	-0.00				0.02*	0.01*
				(0.41)	(0.49)				(0.11)	(0.05)				(1.78)	(1.67)
IDVOL				0.07	0.07				0.14	0.14				0.18*	0.18*
				(0.31)	(0.31)				(1.00)	(1.00)				(1.71)	(1.71)
DISP				0.00	0.00				0.00	0.00				-0.00	-0.00
				(0.72)	(0.70)				(1.45)	(1.43)				(0.31)	(0.35)
AG				-0.30	-0.29				-0.30*	-0.29*				-0.31*	-0.30*
				(1.63)	(1.62)				(1.77)	(1.77)				(1.73)	(1.73)
UNRATED				-0.28	-0.31				-0.31*	-0.33*				-0.40**	-0.41***
				(1.28)	(1.39)				(1.77)	(1.90)				(2.56)	(2.67)
SPECULATIVE				-0.38	-0.43				-0.37**	-0.41**				-0.34**	-0.36**
				(1.47)	(1.62)				(2.01)	(2.19)				(2.21)	(2.37)
Intercept	0.80**	0.48	0.58	0.89	1.09	0.81***	0.89	0.98	0.81	0.98	0.80***	1.09*	1.16*	0.91	1.04
	(2.53)	(0.35)	(0.42)	(0.53)	(0.65)	(4.04)	(0.96)	(1.06)	(0.65)	(0.79)	(5.60)	(1.70)	(1.81)	(0.90)	(1.03)
Adj. R^2	0.01%	0.16%	0.19%	0.19%	0.22%	0.03%	0.36%	0.43%	0.51%	0.57%	0.02%	0.64%	0.72%	1.03%	1.10%
Obs	86,056	86,056	86,056	86,056	86,056	85,222	85,222	85,222	85,222	85,222	83,696	83,696	83,696	83,696	83,696

Panel B

	9-month					12-month					15-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.13		-0.33***		-0.32***	-0.08		-0.28***		-0.28***	-0.05		-0.26***		-0.26***
	(1.35)		(3.23)		(3.21)	(0.84)		(3.00)		(3.01)	(0.57)		(2.92)		(2.95)
R01		0.00	0.00	-0.00	-0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
		(0.20)	(0.23)	(0.04)	(0.01)		(0.65)	(0.67)	(0.37)	(0.40)		(0.40)	(0.43)	(0.02)	(0.05)
R12		0.00	0.00	0.00	0.00		-0.00	0.00	0.00	0.00		-0.00	-0.00	-0.00	-0.00
		(0.73)	(0.77)	(1.12)	(1.17)		(0.01)	(0.03)	(0.41)	(0.46)		(0.78)	(0.74)	(0.28)	(0.22)
BM		0.42***	0.42***	0.36***	0.36***		0.38***	0.38***	0.32***	0.32***		0.35***	0.36***	0.29***	0.30***
		(3.57)	(3.59)	(3.26)	(3.27)		(3.48)	(3.50)	(3.11)	(3.13)		(3.68)	(3.71)	(3.26)	(3.27)
ML		0.62**	0.74**	0.46	0.59*		0.68**	0.78***	0.57**	0.68**		0.73***	0.82***	0.67**	0.77***
		(2.05)	(2.38)	(1.46)	(1.81)		(2.45)	(2.75)	(1.98)	(2.31)		(2.88)	(3.19)	(2.53)	(2.86)
SZ		-0.08**	-0.09***	-0.08	-0.09*		-0.11***	-0.11***	-0.09**	-0.10**		-0.12***	-0.12***	-0.08**	-0.09**
		(2.44)	(2.62)	(1.48)	(1.65)		(3.33)	(3.49)	(1.97)	(2.14)		(3.96)	(4.12)	(1.99)	(2.17)
ILLIQ				0.01	0.01				0.01	0.01				0.01	0.01
				(1.26)	(1.19)				(1.01)	(0.92)				(1.11)	(1.00)
IDVOL				0.20**	0.20**				0.22***	0.21***				0.24***	0.24***
				(2.20)	(2.20)				(2.87)	(2.86)				(3.66)	(3.66)
DISP				-0.00	-0.00				-0.00	-0.00				-0.00	-0.00
				(1.48)	(1.56)				(1.57)	(1.63)				(1.41)	(1.46)
AG				-0.34*	-0.33*				-0.31*	-0.31*				-0.28*	-0.28*
				(1.93)	(1.93)				(1.92)	(1.93)				(1.91)	(1.91)
UNRATED				-0.43***	-0.45***				-0.41***	-0.43***				-0.38***	-0.39***
				(3.19)	(3.29)				(3.36)	(3.45)				(3.31)	(3.40)
SPECULATIVE				-0.38***	-0.41***				-0.42***	-0.44***				-0.44***	-0.46***
				(2.94)	(3.10)				(3.27)	(3.41)				(3.58)	(3.70)
Intercept	0.79***	1.54***	1.59***	1.40	1.51*	0.79***	1.90***	1.95***	1.57**	1.67**	0.80***	2.05***	2.09***	1.37**	1.46**
	(6.69)	(2.79)	(2.90)	(1.55)	(1.67)	(7.35)	(3.71)	(3.82)	(1.99)	(2.11)	(8.16)	(4.49)	(4.60)	(1.98)	(2.11)
Adj. R^2	0.01%	1.05%	1.13%	1.73%	1.81%	0.00%	1.41%	1.49%	2.31%	2.39%	0.00%	1.82%	1.90%	2.99%	3.07%
Obs	81,965	81,965	81,965	81,965	81,965	80,145	80,145	80,145	80,145	80,145	78,239	78,239	78,239	78,239	78,239

Table B10

Panel Regressions: J=6

This table shows results from panel regressions of firm's K-month average excess returns (in percentage) on the measure AIUR as well as controls for expected returns. The values of K are 1, 3, 6, 9, 12, and 15. AIUR is constructed as the J-month moving average of residuals from 10-year rolling-window regressions of the logarithm of all-in-undrawn spread on a set of loan spread determinants. The control variables include reversal (R01), momentum (R12), book-to-market ratio (BM), market leverage (ML), firm size (SZ), Amihud (2002) illiquidity (ILLIQ), idiosyncratic volatility (IDVOL), analyst forecast dispersion (DISP), asset growth (AG), unrated indicator (UNRATED), and speculative-grade indicator (SPECULATIVE). The detailed definitions are provided in Table 0. The sample period is from January 1994 to December 2016. *t*-statistics (based on standard errors clustered by firm and month) are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A

	1-month					3-month					6-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.38**		-0.53***		-0.54***	-0.29**		-0.44***		-0.46***	-0.23*		-0.39***		-0.39***
	(2.52)		(3.62)		(3.62)	(2.15)		(3.24)		(3.27)	(1.88)		(3.16)		(3.11)
R01		0.01	0.01	0.01	0.01		-0.00	-0.00	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00
		(0.31)	(0.32)	(0.31)	(0.32)		(0.20)	(0.20)	(0.24)	(0.23)		(0.36)	(0.35)	(0.47)	(0.45)
R12		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
		(0.58)	(0.60)	(0.67)	(0.70)		(0.59)	(0.62)	(0.75)	(0.79)		(0.77)	(0.81)	(1.03)	(1.07)
BM		0.41**	0.42**	0.40**	0.40**		0.37***	0.37***	0.35***	0.35***		0.38***	0.38***	0.34***	0.34***
		(2.36)	(2.38)	(2.30)	(2.32)		(2.66)	(2.68)	(2.58)	(2.59)		(3.17)	(3.19)	(2.91)	(2.93)
ML		0.55	0.73	0.55	0.76		0.57	0.72*	0.62	0.79*		0.68*	0.82**	0.60	0.75*
		(0.98)	(1.28)	(0.94)	(1.26)		(1.35)	(1.68)	(1.37)	(1.70)		(1.86)	(2.17)	(1.55)	(1.88)
SZ		-0.00	-0.01	-0.05	-0.07		-0.02	-0.03	-0.02	-0.04		-0.02	-0.03	-0.02	-0.03
		(0.03)	(0.14)	(0.56)	(0.73)		(0.26)	(0.41)	(0.30)	(0.49)		(0.58)	(0.78)	(0.28)	(0.50)
ILLIQ				-0.02	-0.03				-0.03	-0.03				0.02	0.02
				(0.70)	(0.81)				(0.91)	(1.00)				(0.81)	(0.68)
IDVOL				0.00	0.00				0.08	0.08				0.14	0.14
				(0.02)	(0.02)				(0.58)	(0.58)				(1.23)	(1.22)
DISP				0.00	0.00				0.00	0.00				0.00	0.00
				(1.20)	(1.18)				(1.20)	(1.18)				(0.23)	(0.21)
AG				-0.26	-0.26				-0.23	-0.22				-0.26	-0.25
				(1.42)	(1.41)				(1.46)	(1.45)				(1.43)	(1.43)
UNRATED				-0.27	-0.30				-0.19	-0.21				-0.30*	-0.32**
				(1.12)	(1.22)				(1.07)	(1.18)				(1.90)	(2.01)
SPECULATIVE				-0.30	-0.35				-0.31	-0.35*				-0.32*	-0.35**
				(1.05)	(1.18)				(1.51)	(1.66)				(1.92)	(2.08)
Intercept	0.79**	0.38	0.48	1.33	1.54	0.80***	0.62	0.71	0.72	0.89	0.81***	0.72	0.80	0.60	0.75
	(2.42)	(0.26)	(0.33)	(0.80)	(0.92)	(3.90)	(0.63)	(0.72)	(0.58)	(0.72)	(5.69)	(1.07)	(1.19)	(0.60)	(0.75)
Adj. R^2	0.01%	0.11%	0.13%	0.14%	0.16%	0.02%	0.28%	0.33%	0.37%	0.42%	0.03%	0.55%	0.62%	0.83%	0.90%
Obs	58,786	58,786	58,786	58,786	58,786	58,290	58,290	58,290	58,290	58,290	57,322	57,322	57,322	57,322	57,322

Panel B

	9-month					12-month					15-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.13		-0.31***		-0.31***	-0.07		-0.27***		-0.27***	-0.04		-0.26***		-0.26***
	(1.25)		(2.85)		(2.79)	(0.70)		(2.76)		(2.72)	(0.48)		(2.83)		(2.84)
R01		0.00	0.00	-0.00	-0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
		(0.05)	(0.06)	(0.15)	(0.13)		(0.41)	(0.43)	(0.17)	(0.19)		(0.51)	(0.53)	(0.18)	(0.20)
R12		0.00	0.00	0.00	0.00		-0.00	-0.00	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00
		(0.33)	(0.36)	(0.63)	(0.68)		(0.42)	(0.39)	(0.07)	(0.03)		(0.89)	(0.85)	(0.45)	(0.40)
BM		0.39***	0.39***	0.34***	0.34***		0.33***	0.33***	0.28***	0.28***		0.33***	0.33***	0.27***	0.27***
		(3.30)	(3.32)	(2.98)	(2.99)		(3.00)	(3.02)	(2.59)	(2.60)		(3.25)	(3.27)	(2.77)	(2.78)
ML		0.70**	0.80**	0.55	0.66*		0.83***	0.92***	0.72**	0.82***		0.86***	0.95***	0.81***	0.91***
		(2.11)	(2.38)	(1.58)	(1.88)		(2.81)	(3.07)	(2.32)	(2.60)		(3.21)	(3.49)	(2.89)	(3.18)
SZ		-0.05	-0.06*	-0.05	-0.06		-0.09***	-0.10***	-0.07	-0.08*		-0.11***	-0.12***	-0.07*	-0.08*
		(1.52)	(1.70)	(0.90)	(1.08)		(2.79)	(2.96)	(1.57)	(1.75)		(3.67)	(3.83)	(1.76)	(1.94)
ILLIQ				0.03	0.02				0.02	0.02				0.02	0.02
				(1.20)	(1.06)				(0.99)	(0.89)				(0.82)	(0.72)
IDVOL				0.17*	0.16*				0.20**	0.20**				0.24***	0.24***
				(1.84)	(1.83)				(2.53)	(2.53)				(3.34)	(3.34)
DISP				-0.00	-0.00				-0.00	-0.00				-0.00	-0.00
				(0.75)	(0.79)				(1.30)	(1.34)				(1.36)	(1.40)
AG				-0.28	-0.28				-0.26	-0.26				-0.23	-0.23
				(1.63)	(1.64)				(1.63)	(1.63)				(1.62)	(1.62)
UNRATED				-0.37***	-0.39***				-0.37***	-0.39***				-0.36***	-0.37***
				(2.66)	(2.75)				(3.00)	(3.10)				(3.04)	(3.14)
SPECULATIVE				-0.34**	-0.36***				-0.38***	-0.41***				-0.44***	-0.46***
				(2.47)	(2.63)				(3.00)	(3.14)				(3.41)	(3.53)
Intercept	0.80***	1.12**	1.18**	0.99	1.11	0.78***	1.67***	1.72***	1.29*	1.39*	0.79***	1.99***	2.04***	1.25*	1.35*
	(6.99)	(1.98)	(2.09)	(1.12)	(1.25)	(7.51)	(3.19)	(3.30)	(1.65)	(1.78)	(8.00)	(4.16)	(4.28)	(1.74)	(1.88)
Adj. R^2	0.01%	0.89%	0.96%	1.45%	1.52%	0.00%	1.27%	1.34%	2.06%	2.13%	0.00%	1.77%	1.86%	2.88%	2.96%
Obs	56,183	56,183	56,183	56,183	56,183	54,974	54,974	54,974	54,974	54,974	53,707	53,707	53,707	53,707	53,707

Table B11

Panel Regressions: J=3

This table shows results from panel regressions of firm's K-month average excess returns (in percentage) on the measure AIUR as well as controls for expected returns. The values of K are 1, 3, 6, 9, 12, and 15. AIUR is constructed as the J-month moving average of residuals from 10-year rolling-window regressions of the logarithm of all-in-undrawn spread on a set of loan spread determinants. The control variables include reversal (R01), momentum (R12), book-to-market ratio (BM), market leverage (ML), firm size (SZ), Amihud (2002) illiquidity (ILLIQ), idiosyncratic volatility (IDVOL), analyst forecast dispersion (DISP), asset growth (AG), unrated indicator (UNRATED), and speculative-grade indicator (SPECULATIVE). The detailed definitions are provided in Table 0. The sample period is from January 1994 to December 2016. *t*-statistics (based on standard errors clustered by firm and month) are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A

	1-month					3-month					6-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.45**		-0.65***		-0.63***	-0.51***		-0.68***		-0.68***	-0.31**		-0.45***		-0.45***
	(2.44)		(3.62)		(3.52)	(3.08)		(3.95)		(3.96)	(2.32)		(3.34)		(3.26)
R01		0.01	0.01	0.01	0.01		-0.00	0.00	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00
		(0.35)	(0.36)	(0.35)	(0.36)		(0.01)	(0.01)	(0.03)	(0.01)		(0.23)	(0.21)	(0.30)	(0.28)
R12		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
		(1.20)	(1.23)	(1.31)	(1.34)		(0.67)	(0.71)	(0.84)	(0.90)		(0.57)	(0.61)	(0.77)	(0.82)
BM		0.53**	0.54**	0.51**	0.51**		0.49***	0.49***	0.47**	0.47**		0.36***	0.36***	0.32**	0.33**
		(2.38)	(2.40)	(2.22)	(2.24)		(2.61)	(2.62)	(2.50)	(2.50)		(2.70)	(2.72)	(2.51)	(2.53)
ML		0.65	0.87	0.76	1.00		0.34	0.57	0.35	0.61		0.59	0.74*	0.53	0.70
		(0.97)	(1.29)	(1.06)	(1.39)		(0.67)	(1.12)	(0.64)	(1.11)		(1.54)	(1.90)	(1.25)	(1.61)
SZ		-0.03	-0.05	-0.06	-0.08		-0.03	-0.05	-0.04	-0.06		-0.01	-0.02	-0.01	-0.03
		(0.35)	(0.48)	(0.53)	(0.71)		(0.49)	(0.70)	(0.52)	(0.79)		(0.23)	(0.45)	(0.18)	(0.43)
ILLIQ				0.13*	0.12*				0.02	0.01				0.04	0.03
				(1.94)	(1.87)				(0.48)	(0.30)				(1.24)	(1.10)
IDVOL				-0.04	-0.04				0.08	0.07				0.09	0.09
				(0.15)	(0.16)				(0.54)	(0.52)				(0.79)	(0.77)
DISP				0.00***	0.00***				0.00***	0.00***				0.00	0.00
				(13.32)	(13.29)				(24.03)	(23.69)				(1.03)	(0.85)
AG				-0.16	-0.16				-0.14	-0.14				-0.15	-0.14
				(1.09)	(1.09)				(1.10)	(1.10)				(0.99)	(0.98)
UNRATED				-0.18	-0.21				-0.27	-0.30				-0.26	-0.28*
				(0.59)	(0.68)				(1.26)	(1.39)				(1.56)	(1.67)
SPECULATIVE				-0.33	-0.39				-0.37	-0.43*				-0.29	-0.32*
				(1.02)	(1.17)				(1.50)	(1.72)				(1.49)	(1.68)
Intercept	0.73**	0.63	0.76	1.16	1.42	0.75***	0.78	0.92	1.00	1.27	0.78***	0.54	0.64	0.59	0.78
	(2.23)	(0.40)	(0.48)	(0.64)	(0.77)	(3.54)	(0.71)	(0.84)	(0.70)	(0.89)	(5.46)	(0.74)	(0.88)	(0.58)	(0.76)
Adj. R^2	0.02%	0.21%	0.25%	0.27%	0.31%	0.07%	0.47%	0.59%	0.55%	0.67%	0.05%	0.44%	0.54%	0.59%	0.70%
Obs	29,891	29,891	29,891	29,891	29,891	29,683	29,683	29,683	29,683	29,683	29,267	29,267	29,267	29,267	29,267

Panel B

	9-month					12-month					15-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.26**		-0.42***		-0.42***	-0.11		-0.30***		-0.30***	-0.08		-0.29***		-0.30***
	(2.25)		(3.57)		(3.51)	(1.05)		(2.86)		(2.82)	(0.89)		(3.16)		(3.15)
R01		0.00	0.00	0.00	0.00		0.00	0.01	0.00	0.00		0.00	0.00	0.00	0.00
		(0.23)	(0.26)	(0.08)	(0.12)		(0.99)	(1.01)	(0.77)	(0.80)		(1.07)	(1.10)	(0.76)	(0.79)
R12		0.00	0.00	0.00	0.00		-0.00	-0.00	-0.00	-0.00		-0.00	-0.00	-0.00	-0.00
		(0.60)	(0.65)	(0.85)	(0.91)		(0.36)	(0.33)	(0.09)	(0.04)		(1.03)	(0.99)	(0.66)	(0.60)
BM		0.42***	0.42***	0.37***	0.38***		0.31**	0.31**	0.26**	0.26**		0.29**	0.29**	0.23**	0.23**
		(3.06)	(3.09)	(2.82)	(2.85)		(2.42)	(2.44)	(2.14)	(2.15)		(2.51)	(2.53)	(2.12)	(2.13)
ML		0.62*	0.76**	0.51	0.66*		0.87***	0.97***	0.72**	0.83**		0.92***	1.02***	0.86***	0.97***
		(1.78)	(2.15)	(1.37)	(1.76)		(2.64)	(2.91)	(2.08)	(2.37)		(3.12)	(3.42)	(2.74)	(3.05)
SZ		-0.03	-0.04	-0.03	-0.04		-0.07**	-0.08**	-0.05	-0.06		-0.11***	-0.12***	-0.07	-0.08*
		(0.84)	(1.09)	(0.52)	(0.79)		(2.00)	(2.19)	(1.14)	(1.34)		(3.53)	(3.73)	(1.58)	(1.80)
ILLIQ				0.03	0.03				0.02	0.01				0.01	0.01
				(1.44)	(1.25)				(0.78)	(0.65)				(0.54)	(0.43)
IDVOL				0.14	0.14				0.19**	0.19**				0.25***	0.25***
				(1.54)	(1.52)				(2.31)	(2.30)				(3.28)	(3.27)
DISP				0.00***	0.00***				-0.00***	-0.00***				-0.00***	-0.00***
				(3.53)	(3.33)				(7.50)	(7.71)				(6.07)	(6.30)
AG				-0.19	-0.19				-0.17	-0.17				-0.16	-0.16
				(1.23)	(1.24)				(1.26)	(1.26)				(1.26)	(1.26)
UNRATED				-0.36**	-0.38***				-0.37***	-0.39***				-0.36***	-0.37***
				(2.55)	(2.67)				(2.89)	(2.98)				(3.03)	(3.14)
SPECULATIVE				-0.38**	-0.41***				-0.36***	-0.39***				-0.46***	-0.48***
				(2.53)	(2.75)				(2.79)	(2.96)				(3.53)	(3.68)
Intercept	0.79***	0.79	0.88	0.75	0.93	0.78***	1.34**	1.40**	1.03	1.15	0.79***	1.95***	2.01***	1.12	1.24*
	(6.97)	(1.33)	(1.49)	(0.82)	(1.00)	(7.78)	(2.43)	(2.56)	(1.29)	(1.43)	(8.05)	(3.96)	(4.10)	(1.53)	(1.69)
Adj. R^2	0.05%	0.83%	0.97%	1.27%	1.41%	0.01%	1.09%	1.18%	1.73%	1.82%	0.01%	1.69%	1.80%	2.79%	2.90%
Obs	28,703	28,703	28,703	28,703	28,703	28,113	28,113	28,113	28,113	28,113	27,483	27,483	27,483	27,483	27,483

Table B12

Panel Regressions: J=12

This table shows results from panel regressions of firm's K-month average excess returns (in percentage) on the measure AIUR as well as controls for expected returns. The values of K are 1, 3, 6, 9, 12, and 15. AIUR is constructed as the J-month moving average of residuals from 10-year rolling-window regressions of the logarithm of all-in-undrawn spread on a set of loan spread determinants. The control variables include reversal (R01), momentum (R12), book-to-market ratio (BM), market leverage (ML), firm size (SZ), Amihud (2002) illiquidity (ILLIQ), idiosyncratic volatility (IDVOL), analyst forecast dispersion (DISP), asset growth (AG), unrated indicator (UNRATED), and speculative-grade indicator (SPECULATIVE). The detailed definitions are provided in Table 0. The sample period is from January 1994 to December 2016. *t*-statistics (based on standard errors clustered by firm and month) are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A

	1-month					3-month					6-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.31**		-0.48***		-0.49***	-0.26**		-0.45***		-0.46***	-0.17*		-0.38***		-0.38***
	(2.57)		(3.97)		(3.93)	(2.43)		(4.16)		(4.13)	(1.77)		(3.72)		(3.68)
R01		0.01	0.01	0.01	0.01		0.00	0.00	0.00	0.00		-0.00	-0.00	-0.00	-0.00
		(0.80)	(0.81)	(0.79)	(0.80)		(0.16)	(0.17)	(0.08)	(0.10)		(0.39)	(0.37)	(0.58)	(0.55)
R12		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00*
		(1.06)	(1.09)	(1.20)	(1.24)		(1.10)	(1.14)	(1.36)	(1.41)		(1.26)	(1.31)	(1.61)	(1.67)
BM		0.42**	0.43**	0.40**	0.41**		0.41***	0.41***	0.38***	0.38***		0.40***	0.41***	0.36***	0.36***
		(2.36)	(2.38)	(2.31)	(2.33)		(3.25)	(3.28)	(3.15)	(3.17)		(3.16)	(3.18)	(2.96)	(2.97)
ML		0.42	0.58	0.35	0.53		0.52	0.67*	0.40	0.57		0.62**	0.75**	0.45	0.59*
		(0.85)	(1.17)	(0.72)	(1.06)		(1.41)	(1.79)	(1.06)	(1.47)		(2.00)	(2.36)	(1.40)	(1.79)
SZ		-0.04	-0.05	-0.11	-0.12		-0.07	-0.08	-0.08	-0.09		-0.09**	-0.10**	-0.08	-0.09
		(0.51)	(0.61)	(1.13)	(1.26)		(1.25)	(1.40)	(1.12)	(1.29)		(2.30)	(2.47)	(1.35)	(1.51)
ILLIQ				0.00	0.00				0.01	0.01				0.01**	0.01**
				(0.14)	(0.06)				(0.95)	(0.81)				(2.16)	(2.04)
IDVOL				0.02	0.02				0.13	0.13				0.20*	0.20*
				(0.09)	(0.08)				(0.92)	(0.91)				(1.85)	(1.85)
DISP				0.00	0.00				0.00	0.00				-0.00	-0.00
				(0.76)	(0.74)				(0.91)	(0.86)				(1.25)	(1.33)
AG				-0.30*	-0.30*				-0.32**	-0.32**				-0.34**	-0.34**
				(1.77)	(1.76)				(2.01)	(2.00)				(1.98)	(1.98)
UNRATED				-0.42*	-0.44**				-0.38**	-0.40**				-0.44***	-0.45***
				(1.88)	(1.96)				(2.33)	(2.44)				(2.92)	(3.02)
SPECULATIVE				-0.38	-0.42*				-0.35**	-0.38**				-0.38***	-0.40***
				(1.57)	(1.69)				(2.06)	(2.23)				(2.59)	(2.75)
Intercept	0.79**	0.95	1.02	2.15	2.30	0.80***	1.35	1.42	1.56	1.70	0.80***	1.62***	1.67***	1.45	1.57
	(2.47)	(0.71)	(0.76)	(1.31)	(1.39)	(3.84)	(1.48)	(1.56)	(1.23)	(1.34)	(5.31)	(2.58)	(2.68)	(1.40)	(1.51)
Adj. R^2	0.01%	0.14%	0.16%	0.17%	0.19%	0.02%	0.38%	0.43%	0.52%	0.57%	0.01%	0.74%	0.81%	1.17%	1.24%
Obs	111,217	111,217	111,217	111,217	111,217	110,032	110,032	110,032	110,032	110,032	107,960	107,960	107,960	107,960	107,960

Panel B

	9-month					12-month					15-month				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
AIUR	-0.11		-0.32***		-0.32***	-0.06		-0.27***		-0.27***	-0.02		-0.23***		-0.24***
	(1.21)		(3.34)		(3.33)	(0.72)		(2.99)		(3.01)	(0.26)		(2.73)		(2.76)
R01		-0.00	0.00	-0.00	-0.00		0.00	0.00	0.00	0.00		0.00	0.00	-0.00	-0.00
		(0.01)	(0.01)	(0.27)	(0.25)		(0.38)	(0.40)	(0.06)	(0.09)		(0.05)	(0.07)	(0.40)	(0.37)
R12		0.00	0.00	0.00	0.00		-0.00	-0.00	0.00	0.00		-0.00	-0.00	-0.00	-0.00
		(0.77)	(0.82)	(1.14)	(1.20)		(0.13)	(0.08)	(0.28)	(0.33)		(0.96)	(0.91)	(0.50)	(0.43)
BM		0.42***	0.43***	0.37***	0.37***		0.39***	0.39***	0.33***	0.34***		0.37***	0.37***	0.31***	0.31***
		(3.50)	(3.52)	(3.25)	(3.27)		(3.58)	(3.61)	(3.27)	(3.29)		(3.70)	(3.72)	(3.33)	(3.35)
ML		0.57**	0.68**	0.43	0.55*		0.61**	0.71***	0.53*	0.63**		0.68***	0.76***	0.61**	0.70***
		(1.98)	(2.32)	(1.43)	(1.80)		(2.33)	(2.64)	(1.90)	(2.24)		(2.83)	(3.12)	(2.41)	(2.72)
SZ		-0.11***	-0.11***	-0.10*	-0.11**		-0.12***	-0.12***	-0.10**	-0.10**		-0.12***	-0.13***	-0.08**	-0.09**
		(3.12)	(3.28)	(1.87)	(2.01)		(3.68)	(3.83)	(2.07)	(2.21)		(4.27)	(4.41)	(2.04)	(2.18)
ILLIQ				0.01	0.01				0.01	0.00				0.00	0.00
				(1.39)	(1.28)				(0.95)	(0.83)				(0.73)	(0.60)
IDVOL				0.20**	0.20**				0.22***	0.22***				0.25***	0.25***
				(2.32)	(2.32)				(3.03)	(3.03)				(3.88)	(3.88)
DISP				-0.00**	-0.00**				-0.00*	-0.00*				-0.00	-0.00
				(2.08)	(2.18)				(1.76)	(1.83)				(1.36)	(1.41)
AG				-0.37**	-0.37**				-0.35**	-0.35**				-0.33**	-0.32**
				(2.18)	(2.18)				(2.17)	(2.17)				(2.15)	(2.15)
UNRATED				-0.45***	-0.46***				-0.40***	-0.41***				-0.36***	-0.37***
				(3.36)	(3.45)				(3.35)	(3.43)				(3.31)	(3.39)
SPECULATIVE				-0.41***	-0.43***				-0.42***	-0.44***				-0.41***	-0.42***
				(3.16)	(3.30)				(3.41)	(3.53)				(3.50)	(3.61)
Intercept	0.80***	1.88***	1.92***	1.75*	1.85**	0.79***	2.02***	2.06***	1.64**	1.72**	0.81***	2.12***	2.15***	1.38**	1.46**
	(6.40)	(3.45)	(3.55)	(1.89)	(1.99)	(7.30)	(4.10)	(4.19)	(2.08)	(2.18)	(8.33)	(4.85)	(4.94)	(2.02)	(2.12)
Adj. R^2	0.01%	1.15%	1.22%	1.85%	1.93%	0.00%	1.48%	1.55%	2.41%	2.48%	0.00%	1.93%	1.99%	3.15%	3.22%
Obs	105,641	105,641	105,641	105,641	105,641	103,211	103,211	103,211	103,211	103,211	100,767	100,767	100,767	100,767	100,767