Securities Financing and Asset Markets: New Evidence

Tomas Breach
UC Berkeley

Thomas B. King*
FRB Chicago

September 7, 2021

Abstract

Using new survey data on bilateral securities funding, we document that financing rates, collateral haircuts, lending maturities, and position limits move together over time and across asset classes. Liquidity of the underlying securities, as opposed to their volatility or credit risk, is the main driver of funding terms, although dealer balance-sheet constraints also appear to play a role. Instrumenting with dealers' self-reported reasons for changing terms, we find that funding conditions had little effect on cash securities markets between 2011 and 2019, but the tightening of terms during the COVID-19 crisis likely impaired liquidity and reduced asset returns to some degree.

*Corresponding author, thomas.king@chi.frb.gov. For helpful comments and discussions, we thank Bob Barsky, Stefania D'Amico, Gary Gorton, Matthia Landoni, Yiyao Wang, and participants at the 2019 Federal Reserve Day-Ahead Conference and 2020 University of Maryland/Federal Reserve Board Conference on Short-Term Funding Markets. Corey Feldman and Tim Seida provided excellent research assistance. The views expressed here do not reflect official positions of the Federal Reserve Bank of Chicago or the Federal Reserve System.

1 Introduction

The global financial crisis (GFC) of 2007 - 2009 demonstrated the potential importance of securities-financing arrangements between dealers and their clients for market functioning and financial stability. Indeed, Brunnermeier (2009), Gorton and Metrick (2012a), and others argue that these transactions were central to the liquidity spirals and fire sales observed among certain risky assets at the time. The exact size of the market is unclear, but Copeland, Davis, LeSueur, and Martin (2012) estimate dealer-to-client repo (a subset of total dealer-to-client activity) at between \$1 trillion and \$2 trillion as of 2012. The economic importance of these arrangements may be even greater than those numbers suggest, as bilateral repo and margin lending are key channels through which hedge funds and other arbitrageurs obtain leverage, facilitating price discovery and liquidity across a range of securities markets. Several recent theoretical papers model collateralized funding to understand both how terms in this market are set and how funding conditions relate to conditions in the market for the securities that are being financed or to broader aspects of financial stability.[1]

Despite the theoretical interest in this market and its evident practical relevance, empirical facts are remarkably hard to come by. Most of what is known about bilateral securities financing, particularly for riskier collateral, is either anecdotal or derives from case studies with uncertain generalizability. For example, while there is broad consensus that financing constraints had important effects on the liquidity and pricing of certain securities during the GFC, there is no systematic evidence on their impact during normal times or in the more-recent market deterioration around the advent of COVID-19. The reason for this gap in the empirical literature is clear: comprehensive data simply do not exist. Adrian, Begalle, Copeland, and Martin (2014) and Baklanova, Copeland, and McCaughrin (2015) discuss the opacity of bilateral securities financing and bemoan the lack of data.

In this paper, we provide new evidence on bilateral dealer-to-client securities financing and its relationship to the respective cash markets for securities by exploiting the Senior Credit Officer Opinion Survey, or "SCOOS." This survey was launched by the Federal Reserve in 2010 precisely out of a recognition that systematic information about this market was lacking. Every quarter, the SCOOS surveys the roughly twenty broker-dealers with the

[1]See Gromb and Vayanos (2002); Brunnermeier and Pedersen (2009); Geanakoplos (2010); Ashcraft, Garleanu, and Pedersen (2011); Martin, Skeie, and von Thadden (2014); Fostel and Geanakoplos (2015); and Barsky, Bogusz, and Easton (2016).

largest presence in bilateral securities financing. According to the Fed, these institutions "account for almost all of the dealer financing of dollar-denominated securities to nondealers." The survey asks about the various terms on financing transactions across several different asset classes and client types. It also asks related questions on demand for securities financing, the reasons that dealers are changing their terms, and liquidity in the underlying cash-securities markets. Although the data are public, we are not aware of any previous attempt to use or analyze them in a systematic way.[2]

A simple tabulation of the survey responses reveals that dealers tend to change all types of terms together. The primary margin of adjustment is financing rates, but, within any asset class, changes in the "tightness" of financing rates are highly positively correlated with moves in haircuts, maturities, and maximum lending amounts. This observation presents some challenge for popular theoretical models—including Geanakoplos (2010), Garleanu and Pedersen (2011), Araujo, Kubler, and Schommer (2012), and Fostel and Geanakoplos (2015)—in which financing spreads are either constant or are negatively related to haircuts and in which maturity and position limits play no role. Instead, we show that the market is dominated by factors that move *all* types of financing terms, and move them in the same direction.

We present evidence on what those factors are by matching the SCOOS—by quarter and, where possible, by asset class—with a variety of data on market conditions, including financing and trading volumes, asset returns, securities issuance, and various measures of risk and volatility. While many of these variables are correlated to some degree with financing terms, the factor that emerges as most important is the liquidity of the underlying securities markets. All funding terms across all asset classes display strong unconditional correlations with measures of market liquidity. These correlations survive a variety of controls and specifications, and indeed the inclusion of liquidity largely renders other measures of market conditions, such as volatilities and credit-risk spreads, insignificant in regressions.

The observation that funding terms tighten when asset-market liquidity deteriorates is consistent both with the possibility that dealers pull back on funding to avoid having to dump collateral in illiquid markets and with the possibility that market liquidity itself could be adversely affected by more restrictive financing conditions. To distinguish the direction of

[2] The SCOOS is released quarterly at https://www.federalreserve.gov/data/scoos.htm. Eichner and Natalucci (2010) discuss the design of the survey in detail. Adrian, Begalle, Copeland, and Martin (2014) explain how the SCOOS might fit into a broader system for monitoring financial stability.

causality, we exploit additional SCOOS questions that ask dealers about the most-important reasons that terms on client leverage change from quarter to quarter. We use the answers to these questions to isolate the changes in spreads, haircuts, etc. that are due to factors *other than* liquidity. Changes in terms that are exogenous in this sense have only a weak relationship with liquidity for most asset classes in most quarters. Similarly, once other factors are controlled for, we find only a modest effect of funding terms on asset prices. Models such as Gromb and Vayanos (2002), Brunnermeier and Pedersen (2009), and Garleanu and Pedersen (2011) imply that funding conditions can be important drivers of asset markets during crises, but those models are nonlinear and there is little evidence on whether their mechanisms are also important under normal circumstances. Our results suggest that, during the relatively quiescent period from 2011 - 2019, funding conditions were largely irrelevant for market conditions. However, during the very stressful period in the first half of 2020 we find that the liquidity and prices of risky assets would not have deteriorated as severely if funding conditions had not tightened, consistent with the models.

Our results also reveal other interesting properties of the securities-financing market. First, we find that, even controlling for other market conditions, dealers tighten financing spreads and haircuts when their own equity positions worsen. This suggests a desire to preserve capital and is broadly consistent with the mechanisms behind models such as He and Krishnamurthy (2013) and Adrian and Shin (2014). Second, dealers tend to tighten financing rates (but not other terms) when demand for funding increases. This implies an upward-sloping supply curve for funding that is again suggestive of finite dealer balance-sheet capacity. Finally, perhaps surprisingly, we find only a weak relationship between bilateral dealer-to-client funding conditions and measures of other types of securities-financing activity. The SCOOS series are only modestly correlated with the aggregate volumes of collateralized lending that dealers report on their balance sheets, and they are essentially uncorrelated with available data on tri-party repo. This highlights the potential for segmentation across different short-term funding markets.

As noted above, the primary motivation for our study is the lack of available evidence on securities financing arrangements between dealers and their clients. Indeed, only two other empirical papers, Auh and Landoni (2016) and Baklanova, Caglio, Cipriani, and Copeland (2019), have studied this market in any detail.[3] While the confidential micro data used in

[3]In their study of the tri-party market, Copeland, Martin, and Walker (2014) briefly discussed some

those studies allowed for a number of interesting tests that the SCOOS data do not, their coverage was relatively narrow. In the case of Auh and Landoni, the data were obtained from a single asset manager during the pre-GFC period, and most of the transactions financed mortgage-backed CDO securities. Baklanova et al.'s data come from a sample of nine dealer banks, but they cover only a single calendar quarter and primarily reflect inter-dealer lending, securities-borrowing activity, and transactions backed by Treasury securities. Our paper is complementary to these previous studies, but it takes a broader view by covering a variety of asset classes over a ten-year post-GFC period, with data drawn from the dealers that represent the bulk of the market. Our data exclude inter-dealer financing and dealer demand for securities borrowing, as well as transactions secured by Treasuries; we thus isolate the financing of risky collateral between dealers and clients, which is the market central to theoretical papers like Brunnermeier and Pedersen (2009). Furthermore, we are the first to explore the empirical links between securities financing activity and other market conditions, including liquidity and returns in the securities markets themselves.

While the empirical literature on dealer-to-client securities financing is small, a few papers have explored related markets. Gorton and Metrick (2012a) documented data on inter-dealer financing terms for many different asset classes using data obtained from a single dealer at the height of the GFC. However, it is unclear whether their results extend to a broader sample of market participants, to non-crisis periods, or outside the inter-dealer market.[4] In contrast to the bilateral securities-financing market, the tri-party repo market has been studied in some detail because the data on haircuts, rates, and volumes there are more readily available (Bartolini, Hilton, Sundaresan, and Tonetti, 2011; Copeland, Martin, and Walker, 2014; Krishnamurthy, Nagel, and Orlav, 2014; Hu, Pan, and Wang, 2018). Importantly, however, the tri-party and bilateral markets are quite distinct. The borrowers in the tri-party repo market are almost all dealers, and the lenders are typically money-market funds and other cash investors. In the bilateral market, in contrast, dealers are the lenders, and the borrowers are hedge funds, asset managers, and other "buy side" market participants. This difference, along with other institutional features, creates significant segmentation between the two

confidential data on bilateral-repo haircuts collected by the Federal Reserve Bank of New York, but that was not the focus of their paper.

[4]The distinction between the inter-dealer and dealer-to-client markets is potentially important because dealers are often only intermediaries in securities financing, not end users, and because one would expect that the nature of relationships and counterparty risk differ between dealer-dealer and dealer-client interactions.

markets, and potentially leads to important differences in their behavior. Indeed, as both Copeland et al. and Krishnamurthy et al. discuss, the tri-party market largely functioned well during the 2008 financial crisis, even as the bilateral market reportedly collapsed. Our data are also consistent with substantial differences between these two markets (although we do not focus on the comparison in this paper), as we find very weak correlations between the tri-party data and the SCOOS data.[5]

The remainder of the paper is organized as follows. Section 2 briefly reviews the institutional details of the securities-financing market. Section 3 describes the SCOOS, the main data we pull from it, and the matched data that we obtain from other sources. Section 4 presents summary statistics for these data, including raw correlations of SCOOS terms with various measures of market conditions. Section 5 runs simple regressions to examine how terms are determined. Section 6 presents our analysis of liquidity causality. Section 7 looks at asset returns. Section 8 concludes. An internet appendix contains several robustness checks of our main regressions.

2 Review of securities financing

Before describing our analysis, we briefly review the details of the securities-financing market.[6] Figure 1 provides a schematic representation of a typical financing transaction. The client, which is often a hedge fund or asset manager but could be any type of financial or non-financial institution, wishes to purchase a security and borrow money from the dealer in order to do so. In the example here, the market value of the security is \$100. The security serves as collateral for the loan. In a repo transaction, legal ownership of the security is transferred to the dealer, while in margin lending or other types of financing arrangements the client may retain ownership provided she does not default. Two important contract terms protect the dealer against the risk associated with the loan. First, the loan is overcollateralized—that is, the security receives a haircut. Second, the interest rate can be adjusted. In the example

[5]Martin, Skeie, and von Thadden (2014) provide a theoretical framework that rationalizes some of the differences between the tri-party and bilateral repo markets, particularly during the GFC. Anbil, Anderson, and Senyuz (2021) document such segmentations in the Treasury repo market during the stressful period of September 2019. In an interesting complement to our results, Macchiavelli and Zhou (2019) find a significant link between tri-party funding conditions and the provision of market liquidity at the dealer level.

[6]The institutional minutae of these markets are voluminous. See Acharya and Oncu (2011) and Adrian, Begalle, Copeland, and Martin (2014) for more-thorough treatments.

of Figure 1, the bond is haircut by 20%, so the client must put up \$20 of her own money to fund its purchase. The interest rate is assumed to be 4% annually, and the term of the loan is assumed to be 3 months, so the client pays \$1 in interest.

The expected profit to dealers from financing transactions depends on their marginal cost of funds. A typical arrangement is for dealers to fund their loans by borrowing against the same collateral that they are receiving. That is, they rehypothecate the securities into repo transactions on the other side of their balance sheets. When borrowing, dealers typically face cash providers, such as money-market funds, corporate treasurers, and security lenders, in the tri-party repo market, where they are generally able to obtain somewhat better terms than they provide bilaterally to their clients. In the figure, the dealer rehypothecates the \$100 bond at a rate of 2% and a haircut of 10%, effectively passing through the cash to the client. Three months later, when the transaction unwinds, the dealer passes the security back to the client, and passes the cash from the client to the tri-party counterparty.[7]

The dealer is compensated in two ways for making this market and bearing the associated risk. First, he earns the difference between the rate he charges the client and his own cost of funds. We will refer to this difference as the "financing spread." In the example, the financing spread is 2 percentage points. Second, the dealer retains the cash associated with the difference in haircuts between the bilateral and tri-party loans, and he can earn interest on this cash in the money market. In the example, the difference in haircuts is \$10. Supposing that the dealer can invest cash at 3%, his total compensation (assuming no default) is (.04 80 + .03 10 - .02 90)/4 = \$0.425, or 0.53% of the amount of the loan.

Financing spreads and haircuts, as well as other terms on securities-financing contracts, are negotiated between dealers and their clients on an ongoing basis. They continuously adjust to market conditions, and at any point in time a given dealer's terms may differ across both clients and collateral. To some extent, clients may be able to choose from a menu of terms—trading off higher haircuts for lower financing spreads, for example. Indeed, while financing spreads and haircuts play similar roles in terms of compensating and protecting dealers, from a theoretical perspective it is unclear how they should be jointly determined.

[7]Dealers may also rehypotheate collateral among themselves, depending on their individual financing needs and client security demand. Indeed, while rehypothecation chains typically have their endpoints in the tri-party and dealer-client funding markets, they may involve many intermediate links between different dealers. (See Krishnamurthy, Nagel, and Orlav, 2014.) This accounts for the large footprint of interdealer financing noted above.

Depending on differences in model assumptions, haircuts may move more than financing rates or vice versa, and their fluctuations may be positively or negatively correlated. (See Barsky, Bogusz, and Easton, 2016, for example.)

The empirical evidence on these questions is sparse. Gorton and Metrick (2012a) show that both haircuts and financing rates moved higher during the GFC but that haircuts moved much more. (However, their data were for interdealer transactions, not dealer-client transactions. The large interdealer financing market is not pictured in the figure.) Auh and Landoni (2016) use micro data from an asset manager to show that clients may face a choice of different haircut-financing rate pairs for particular collateral at any point in time. Baklanova, Caglio, Cipriani, and Copeland (2019) use data provided from several banks to document the patterns of terms across asset classes, but many of their results focus on the Treasury market. A 2010 study published by the Committee on the Global Financial System (CGFS, 2010) reported the results of interviews with several funding-market participants. That study noted several different methodologies for how terms were set. (The study focused primarily on the setting of haircuts.) However, respondents frequently emphasized the importance of market liquidity, which is consistent with our main findings below.

While financing spreads and haircuts often attract the most attention, securities-financing contracts also include other terms that may be important. In particular, dealers may not be willing to lend beyond certain maturities, and they may also place limits on the amounts they are willing to lend to a particular counterparty at a point in time. Such position limits have received very little attention in the literature, but they may nonetheless be important. In the CGFS study, for example, interviewees often indicated that credit limits were the first margin of adjustment to be used in times of market stress. The SCOOS provides additional evidence on the behavior of these terms.

A separate question is how the bilateral market relates to the tri-party market. Given the transactions shown in Figure 1, one might expect the two to be closely linked. Yet Krishnamurthy, Nagel, and Orlav (2014) and Copeland, Martin, and Walker (2014) show that tri-party haircuts were largely unchanged during the GFC, even as anecdotal accounts (and the Gorton and Metrick (2012a) evidence) suggested significant tightening in the bilateral market. Our results below also suggest segmentation between these markets during the post-GFC period.[8]

[8]Dealers also finance their own securities inventories through tri-party repo. As Macchiavelli and Zhou

Finally, as mentioned earlier, there is a substantial theoretical literature that relates conditions in secured funding markets to conditions in the cash markets for the collateral securities and, by extension, to overall financial stability. (Brunnermeier and Pedersen, 2009; Garleanu and Pedersen, 2011, and others cited in the introduction.) Because of the lack of data, there is so far no empirical evidence from the bilateral funding market that can speak to these theories outside of the GFC. Below, we present such evidence using the SCOOS.

3 Data

3.1 The SCOOS

In recognition of the lack of data on bilateral securities financing relative to its potential importance, the Federal Reserve launched the Senior Credit Officer Opinion Survey in the second quarter of 2010. The survey design is described in Eichner and Natalucci (2010). A revision that added some questions to the survey took place in Q3 2011, so a few of our data series begin only on that date. Our sample ends in Q2 2020. In addition to securities financing, the SCOOS covers several other topics having to do with dealer-client interactions. In particular, a large section of the survey asks about aspects of the market for over-the-counter derivatives. We largely ignore this other information for the purposes of this paper.

The SCOOS is administered quarterly to "the financial institutions that account for almost all of the dealer financing of dollar-denominated securities to nondealers and that are the most active intermediaries in OTC derivatives markets." Over our sample period the number of respondents to the survey ranged from 20 to 23. Nearly all of the respondent pool consists of primary dealers—the large banks that are the Fed's counterparties in open-market operations. Thus, for some purposes, we will match available information about the primary dealers with the SCOOS data under the assumption that it reflects information about largely the same set of entities.[9]

(2019) show, this can create a link between the funding conditions provided to dealers and the liquidity that dealers provide to cash securities markets.

[9] Primary dealers include the largest broker-dealers operating in the United States. One requirement of primary dealers is that they "provide insight into developments in the markets in which they transact with the New York Fed, on an ongoing basis." Over our sample, the number of primary dealers ranged from 18 to 22. The remaining SCOOS respondents are other financial institutions that, though not primary dealers, have a large presence in the securities-financing or OTC derivatives market.

The main survey questions of interest for us have to do with securities financing. The SCOOS defines this activity as "lending to clients collateralized by securities." It goes on to explain that "such activities may be conducted on a 'repo' desk, on a trading desk engaged in facilitation for institutional clients and/or proprietary transactions, on a funding desk, or on a prime brokerage platform." Thus, the SCOOS takes a broad, institution-wide view of the bilateral funding market. Importantly, however, the definition used here excludes securities-borrowing activity (i.e., situations in which dealers source specific securities to facilitate short selling or delivery), and it excludes financing arrangements with other dealers.

Most of the questions we use are asked individually for each of seven different asset classes (i.e., collateral types): agency mortgage-backed securities, high-yield corporate bonds, equities, high-grade corporate bonds, commercial mortgage-backed securities, consumer asset-backed securities, and non-agency residential MBS. (The questions on the last four categories begin only after the 2011 survey revision.) In each case, respondents are asked to consider only dollar-denominated instruments. The most important questions for us are those that have to do with changes in financing terms. The SCOOS asks specifically about four different types of terms, for each asset class: financing spreads, haircuts, maximum maturities, and maximum amounts (i.e., credit limits). It also asks separately about the terms offered to "average" clients and to clients who are "most favored ... as a consequence of breadth, duration, and/or extent of relationship."

A representative question on terms is the following:[10]

> *Over the past three months, how have the terms under which agency RMBS are funded changed?*
>
> *Terms for average clients:*
>
> *Haircuts:*
>
> __ *Increased considerably*
>
> __ *Increased somewhat*
>
> __ *Remained basically unchanged*
>
> __ *Decreased somewhat*
>
> __ *Decreased considerably*

[10]The use of the passive voice in this question is not meant to indicate that the respondents should assess the direction of terms in the market as a whole. In the introduction to this section of the survey, the instructions specifically note that the questions are about "securities funding at your institution."

The SCOOS questions were modeled after those in the Senior Loan Officer Opinion Survey (SLOOS), which the Federal Reserve has conducted since the 1960s. In both surveys most questions have the sort of qualitative format shown above. There are some obvious drawbacks to dealing with data of this nature—for example, economic significance would be much easier to assess if changes in haircuts were simply expressed in percentage points. On the other hand, there are at least two advantages to the qualitative responses. First, they allow us to draw on the established empirical literature that has adapted to this sort of data in the SLOOS and found it useful.[11] Second, although most of the financing terms could have been quantified in principle, other variables that the SCOOS asks about, such as liquidity and funding demand, are multifaceted and somewhat vaguely defined. In these cases, precise quantitative measurement might not be possible or even desirable.

In any case, we take the SCOOS data as given and, following previous work using the SLOOS, we create diffusion indices for each type of term in each asset class in each quarter:

$$\tau_{i,j,t} = \frac{\#_{\mathrm{t}} \text{ tightening term } i_j - \#_{\mathrm{t}} \text{ easing term } i_j}{\text{total respondents}_{jt}} \tag{1}$$

where i indexes the four types of terms asked about in the SCOOS (haircuts, spreads, maximum maturities, and maximum amounts), j indexes asset class, and t indexes calendar quarters. The total number of respondents is indexed by j because a few dealers do not finance certain types of securities at all and thus do not respond to questions about those asset classes. Note that the indices are signed such that positive values always indicate tighter terms. We also constructed weighted indices, giving a response like "tightened considerably" twice as much weight as "tightened somewhat." However, as we show below, there was very little difference in results between the weighted and unweighted indices. We therefore use the unweighted series in most of our analysis for ease of interpretation.

The SCOOS also asks about demand for securities financing and cash-market liquidity for each of the asset classes. Sample questions of each type are as follows:

> *Over the past three months, how has demand for funding of agency RMBS by your institution's clients changed?*
>
> __ *Increased considerably*

[11] E.g., Gorton and Pennacchi (1995); Lown and Morgan (2006); Ivashina and Scharfstein (2010); Gilchrist and Zakrajsek (2012).

__ *Increased somewhat*

__ *Remained basically unchanged*

__ *Decreased somewhat*

__ *Decreased considerably*

Over the past three months, how have liquidity and functioning in the agency RMBS market changed?

__ *Improved considerably*

__ *Improved somewhat*

__ *Remained basically unchanged*

__ *Deteriorated somewhat*

__ *Deteriorated considerably*

We collect the responses to each of the financing-demand and market-liquidity questions and create diffusion indices in the same manner that we do for the terms questions. In particular, we denote by $\lambda_{j,t}$ the net fraction of dealers reporting improving liquidity and functioning in asset class j at time t. We note that, unlike the other SCOOS questions used here, the "liquidity and functioning" question does not refer to the securities-financing market, but rather to the cash market for the underlying collateral. Indeed, respondents are specifically instructed to take account of a broad set of indicators of that market, and not just financing conditions themselves, when answering this question. That will be important for us later, because we will use the responses to this question as our primary measure of market liquidity. The liquidity question is not asked for the equity market, presumably because equities are exchange-traded and do not face potential illiquidity in the same sense that OTC-traded instruments do.

Finally, in a separate section, the SCOOS asks dealers about the reasons that they tightened or eased their terms in each quarter. These questions do not align directly with the terms questions discussed above, for several reasons. Nevertheless, we exploit these data in some of our analysis in Section 6. We defer the discussion of the details of these questions until then.

3.2 Other data

We match the SCOOS data by date and asset class to a variety of potentially relevant data from other sources. First, we collect data on aggregate security returns. The particular indices we use to measure returns are listed in Table 1. Each edition of the SCOOS reports the dates during which it was conducted (typically, the last or second-to-last week of the second month of each calendar quarter), and all of its questions refer to changes in conditions over the preceding three months. We calculate the return on each index between the same sets of dates. The price indices also allow us to calculate asset-class-specific measures of realized volatility. Specifically, we do this by computing the standard deviation of daily changes in index levels during the month that ends on the SCOOS reporting date. We then difference these series across quarters to obtain a measure of the change in volatility for each asset class that approximately lines up with the timing of the changes in conditions reported in the SCOOS.

A second source of asset-specific information we use is the FR-2004 report produced weekly by the Federal Reserve Bank of New York. This report collects information on the aggregate value of securities that primary dealers receive through operations other than outright purchases ("securities in"), a category that includes bilateral securities financing. As noted above, the SCOOS respondent panel closely matches the set of primary dealers. Since the SCOOS asks about quarterly changes, we compute the percentage differences in the FR-2004 quantities, matched as nearly as possible to SCOOS reporting weeks, relative to three months prior. The FR-2004 also reports the amount of fails-to-deliver in repo transactions and the volumes of secondary-market trading conducted through the primary dealers. Again, they are reported weekly for different asset types (though not for every asset type in every period), and we do the matching to the SCOOS data in the same way as above. To adjust for changes in the amount of financing, we calculate the ratio of the value of fails-to-deliver to the amount of financing occurring that week. We note that the FR-2004 data do not exist separately for every asset class covered by the SCOOS (and the set of asset classes reported changes over time). We therefore must drop some observations when using these data.

To further connect SCOOS responses to activity in asset markets, we use data from SIFMA to match SCOOS responses with quarterly asset-specific gross issuance amounts and (within quarter) percentage changes in monthly trading volumes for structured finance and corporate debt assets. For equities, we take issuance and trading volume data from the Financial Accounts of the United States and the NYSE.[12] For corporate bonds we also construct Amihud (2002) liquidity statistics from a large sample of transactions in TRACE. The paucity of trade data prevent us from calculating these measures for other asset classes.

Since previous work has emphasized differences between the bilteral and tri-party repo markets (Copeland et al., 2014; Krishnamurthy et al., 2014), we investigate these differences further by matching our survey responses to the New York Fed's publicly available tri-party repo data. These data track volumes, market concentration, and percentiles of the distribution of haircut values in the tri-party repo market for each of the asset classes we consider except CMBS, starting in the third quarter of 2010.

We calculate several aggregate measures of dealer health. First, we use the Financial Accounts to compute percentage changes in dealer equity levels and changes in the fraction of liquid assets at securities broker-dealers. Second, using the same data source, we follow Adrian, Etula, and Muir (2014) and compute quarterly percentage changes in (book value) dealer leverage. Third, we compute the average credit default swap spread of the primary dealers, using data from Bloomberg, and we take the ratio to the investment-grade CDX index to obtain a dealer "excess" CDS spread. We compute the first differences of these series across SCOOS reporting dates.

Finally, we make use of a variety of other sources of time-series data. To measure market perceptions of risk and risk aversion, we collect the VIX index of stock-market implied volatility, the MOVE index of Treasury-market volatility, and the swaption-implied volatility of one- and ten-year swaps. To capture broad changes in interest rates, we use 3-month and 10-year Treasury yields. As additional measures of broad financial market conditions, we collect the TED spread, the spread between on- and off-the-run five-year Treasury yields, the Gilchrist-Zakrajsek (2012) excess bond premium, the investment-grade and high-yield non-financial CDX indices, and the Chicago Fed Financial Conditions Index. As above, we difference (or log-difference) all of these series by quarter, matching as closely as possible to the SCOOS reporting dates.

[12]The Financial Accounts data are reported as of quarter-end. We interpolate to obtain measures that line up with the SCOOS reporting dates.

4 Stylized facts about securities financing terms

Panel A of Table 2 shows various measures of the volatility of securities-financing terms, as measured by the SCOOS. The first measure is the standard deviation of each of our diffusion indices. The second measure is the root mean square change (RMSC) in the index for each type of term. The reason for computing the latter statistic is that the indices capture *changes* in terms, and therefore their standard deviations could in principle be zero even if the terms are changing a lot each quarter. The RMSC effectively takes account of both the average change in each term and the variation in that change. Third, we report the average number of dealers changing their terms in either direction in each quarter. This number does not net out negative and positive changes, as our diffusion index does. We compute each of these three volatility measures within each asset class, and we report the averages of each volatility measure across all asset classes in the table. We do this separately for average and most-favored clients, and using both the unweighted and weighted indices. It turns out that dealers tend to change terms in the same direction as each other in any given quarter and that positive and negative changes occur with roughly equal frequency over time. Consequently, all three volatility measures give very similar results.

Regardless of how volatility is measured, terms typically are fairly stable. Only 19% of dealers change their financing spreads in an average quarter, while even fewer change their other terms. Even so, the changes in the other terms are not zero. Maximum maturities move the least, but still about 10% of dealers per quarter change them. Haircuts are less volatile that financing spreads, but more volatile than maximum maturities or maximum amounts.[13]

It is also apparent from the table that the choice of weighted versus unweighted index does not matter much, and that volatilities are similar for average and most-favored clients. Those results are further reinforced in Panel B, which shows the correlations between terms by client status and between the unweighted and weighted indices. For any given term, the two client types and the two indices are very highly correlated. Since they appear to behave in very similar ways, we ignore these distinctions for the remainder of the paper. Henceforth,

[13]The CGFS (2010) study reported that dealers only modestly adjusted their haircuts in response to high-frequency market volatility. Instead, haircuts were reportedly set largely based on Value-at-Risk models based on historical data, with a typical look-back period of ten years. This could explain the lack of volatility, especially during non-crisis periods.

we use only the unweighted indices to measure changes in terms, and we average these indices across average and most-favored clients.

Table 3 breaks out volatility by asset class (measuring volatility as the RMSC). The basic patterns just described hold across most asset classes—although none of the terms is very volatile, financing rates usually move a bit more than other terms do, and maximum maturities and amounts move a bit less. Terms are generally most volatile for private structured products, and they are least volatile for agency MBS and equities.

Figure 2 plots two views of the data. In panel A, we plot the indices for each of the four terms, averaging across all asset classes in each quarter. In panel B, we plot the indices for each of the seven asset classes, averaging across all term types. Terms generally eased during the first year of the SCOOS's existence, as markets continued to recover from the GFC. They tightened sharply in the second half of 2011, around the time of the downgrade of U.S. credit rating and the onset of the European sovereign debt crisis. Then, after a period of relative stability, terms tightened again in 2015 and 2016. This episode was associated with a number of stressful market events, including a sharp selloff in Chinese stocks, a collapse of oil prices, and the U.K.'s "brexit" vote. Terms eased a bit, on net, over the period 2017 to 2019, as markets generally performed well. Finally, and most dramatically, funding terms tightened across the board in the last quarter of our sample, reflecting the retreat from risk taking that occurred with the onset of the COVID-19 crisis.[14]

Stepping back, we note two general properties of these graphs. First, although the brief narrative we have just given emphasized the common movements in terms (and we will see shortly that the correlations among them are indeed high), there is also a substantial amount of dispersion across term types and asset classes. This means that there are potentially interesting phenomena to explain in the cross-sectional dimensions of the data. Second, there is very little serial correlation in the series. We would expect this, since the SCOOS asks about *changes* in terms each quarter. It implies that spurious correlation between SCOOS series and other data is unlikely to be a problem.

Table 4 shows how terms are correlated with each other and with other market data. In

[14]The Q1 and Q2 2020 surveys were conducted in late February and early May, respectively, and thus skip over the most acute financial-market stress that occurred in late March and early April. Still, the large movements in the last quarter of the sample raise the concern that our results could be driven by this one extreme observation. We show below that omitting this quarter from the analysis does not change any of the statistical or economic significance patterns in the data.

panel A, we pool across all asset classes for each type of term. In panel B, we pool across all terms for each asset class. Shaded columns indicate data on which we have only time-series observations, while all other columns are matched both by time and by asset class.

The first four columns of Panel A show how terms correlate with each other. As was evident from Figure 2, all terms move fairly closely together. It is particularly noteworthy, in light of previous empirical work, that changes in financing rates and haircuts have a correlation of over 80%. Within the portfolio of securities that they examine, Auh and Landoni (2016) find that transactions with higher rates have lower haircuts, and Baklanova et al. (2019) find a similar result for U.S. Treasury securities. Our results are not directly comparable, because they are with respect to different asset classes over time, rather than for particular collateral at a point in time. Still, the correlations suggests that spreads, haircuts, and the other terms generally move together in the aggregate. This motivates our search for common factors driving funding-market tightness. On the other hand, the correlations between terms are not perfect, and another question will be whether there are identifiable factors that affect different terms differently.

Columns [5] through [8] show how SCOOS terms correlate with measures of securities-market liquidity. These correlations are quite high, both for the liquidity indicators that are matched by asset class and for the time-series data. They hold across all four terms and (where the measurement is possible) across all seven asset classes. The next four columns show correlations between terms and measures of volatility. The correlations with realized volatility, are positive but modest and are largely driven by corporate bonds.[15] The correlations with equity *implied* volatility is somewhat stronger, while correlations with implied interest-rate volatility are mostly insignificant. Terms also have a modestly negative unconditional relationship with asset returns, though this is almost entirely due to the corporate bond and equity categories. They have little overall correlation with trading volumes, though they do show a negative relationship with issuance for some of the less-liquid asset classes.

Funding demand (column [16]) is negatively correlated with funding terms in some cases and positively correlated in others. Meanwhile, we find moderate negative correlations between terms and the securities-financing volumes reported in the FR-2004, suggesting that, on net, tighter terms tend to reduce the volume of securities financing that takes place. Cor-

[15]Our measure of realized volatility is backward-looking. Following Gorton and Metrick (2012a), we also tried using *future* realized volatility but found little relationship with terms.

relations of financing volumes with SCOOS-reported demand (not shown in the table) are somewhat stronger. [16] Perhaps surprisingly, the correlations of SCOOS terms with measures of activity in the tri-party market are near zero on average. This again highlights the fact that these markets can behave much differently.

The next set of columns contains correlations with measures of dealer condition. These correlations all point to a negative relationship between the health of dealers and the tightness of terms—wider excess CDS spreads, higher leverage, and decreases in equity levels are all associated with tighter funding conditions. Dealers also increase their holdings of liquid asset during quarters when they tighten their terms.

Finally, the last several columns show the correlation of financing terms with other measures of broad market conditions. Terms are tighter in environments with higher credit risk, as measured by the CDX indices, and with the Gilchrist-Zakrajzek (2012) excess bond premium, which is often interpreted as a measure of investor risk-bearing capacity. They have a fairly strong negative correlation with the Chicago Fed Financial Conditions Index, which is not surprising given that that index subsumes many of the other measures of financial conditions just mentioned. Financing terms have a pronounced negative association with interest rates (higher rates are associated with easier terms), presumably reflecting comovement over the business cycle.

5 Determinants of terms

It is clear from the preceding simple correlations that the terms on securities financing change together with market conditions. In particular, terms tend to tighten during periods of market stress. However, measures of market stress are highly correlated with each other, making it difficult to discern which are most connected to securities-financing conditions.

To understand better which variables matter most, we run multivariate regressions of terms on subsets of the other variables. Because of the relatively small sample, we restrict

[16] One reason the correlations between terms and securities-financing volumes are not stronger may be that the FR-2004 data include certain types of funding activity that the SCOOS excludes. In particular, they include securities borrowing and transactions with other dealers. Evidence in Gorton and Metrick (2012b) and Baklanova et al. (2017) suggests that these two categories in fact constitute the majority of dealer activity. After 2015, the FR-2004 breaks out repo volumes from other types of securities-financing contracts for certain asset classes, but the mingling of interdealer and client financing remains.

ourselves to parsimonious specifications. The variables we include in our baseline models are those that appeared unconditionally important in Table 4, those for which we have data across most of the SCOOS sample, and those that seem likely important on *a priori* grounds. Specifically, we include the SCOOS measures of asset-specific financing demand and liquidity; asset-specific realized price volatility; the percentage change in book dealer equity; the high-yield CDX; the VIX; 10-year swaption-implied interest-rate volatility; and the 3-month Treasury bill rate. In addition to this baseline model, we also ran a number of other specifications and obtained similar results. Some of these alternative models are reported in the appendix, and we mention a few highlights from them in the text below.

We run our regressions both for each asset class individually and pooling the data across asset classes. When pooling, we consider a sample that excludes both private MBS, for which we do not have realized volatilities, and equities, for which the SCOOS does not collect the liquidity measure, as well as a sample that excludes only the equities. We also consider specifications that include quarterly time dummies, where of course we have to drop the pure time-series data. We include asset-class fixed effects in all of the pooled models.

Table 5 presents the results of the baseline model using the full sample. The interpretation of the coefficients in this table is the net percentage of dealers that tighten each term type when there is a one-unit change in the independent variable. To get a better sense of the economic significance of these results, Table 6 reports standardized versions of the coefficients—that is, the number of standard deviations of each dependent variable associated with a one-standard-deviation change in each independent variable—using the pooled specification with five asset classes and time-series control variables. (For parsimony, we report standardized coefficients for only this specification, which is the only pooled model that allows us to estimate the coefficients on all of the variables. However, the results for the other pooled models and the disaggregated models, where comparable, are similar.)

Given the very large movements in the data in the second quarter of 2020 amid the outbreak of the COVID-19 crisis, one concern is that the observations from that quarter could be driving the results in Tables 5 and 6. This turns out not to be the case. Table 7 summarizes the results when we drop Q2 2020, in a way that is comparable to Table 6. (Full results are reported in Appendix Table A.1.) We lose a small amount of statistical power dropping these observations, but the signs, magnitudes, and significance patterns are broadly preserved.

We highlight three main results from these regressions: (1) liquidity is the variable that has the strongest conditional association with funding terms; (2) to a lesser extent, funding demand and dealer balance-sheet condition also matter; and (3) conditional on these factors, other risk measures are unimportant. Each of these points is elaborated below.

5.1 Liquidity

Regardless of specification, liquidity appears as the most statistically and economically significant variable for all four terms. It is statistically significant at the 1% level in the all of the pooled regressions and for most of the disaggregated asset-class regressions where this measure is available. The liquidity coefficients are also economically significant—a one-standard-deviation change in liquidity is associated with a change in terms of about two-thirds of a standard deviation, depending on the model. Changes in liquidity are slightly more strongly associated with changes in financing spreads and haircuts than with the other terms. None of these results depends on the large movements during the COVID-19 crisis; indeed, comparison of Tables 6 and 7 shows that, if anything, the economic significance of liquidity is a bit stronger in the sample that excludes the COVID-related observations. Robustness checks reported in the appendix show that this result is also insensitive to alternative vectors of control variables.

We further explore the link between funding terms and market liquidity in Section 6. First, however, we address two other issues associated with the interpretation of the liquidity results.

5.1.1 Justifying the SCOOS liquidity measure

Throughout the paper, we use the liquidity indices λ_{jt} created from the SCOOS as our measure of securities-market liquidity. These indices have the advantages that they are available and measured consistently for six of the seven SCOOS asset classes and that they are matched exactly to the SCOOS terms across both asset classes and time. However, because they are unfamiliar and somewhat difficult to interpret quantitatively, it is important for us to show that they do in fact capture measurable aspects of liquidity.

Table 8 reports regressions of the SCOOS liquidity indices on other measures of liquidity that are available for the two corporate bond series. These are the only asset classes for which we have asset-specific Amihud liquidity measures. The regressions fit well, and both of the right-hand-side liquidity measures are significant with the expected sign. In contrast, asset-class-specific realized volatility is not significant, indicating that the SCOOS liquidity measure is not simply picking up changes in broad market conditions. Thus, at least within these two asset classes, the indices do indeed appear to be accurately summarizing liquidity conditions in their respective markets.

5.1.2 The common component of liquidity

The statistical and economic significance of liquidity is weaker in the pooled model with time dummies (last two columns of Table 5) than in the pooled model with the time-series controls. However, there is reason to think that the model with the time dummies understates the importance of liquidity. Namely, the coefficients in that model reflect only the liquidity effect *within* asset classes, even though it is known that there is a common component to liquidity across markets (e.g., Chordia, Sarkar, and Subrahmanyam, 2005). The effects of any such component will not be reflected in the liquidity coefficient estimates in these models and would instead be swept into the coefficients on the time dummies themselves. To provide some rough evidence that the time fixed effects are themselves largely reflective of liquidity conditions, we extract their coefficients and examine their time-series correlations with other time-series variables.

Table 9 shows the results. The time fixed effects are indeed highly correlated with the cross-asset-class average of the SCOOS liquidity series, with the correlations for the financing spreads and haircut regressions on the order of 70%. Of course, the fixed effects are correlated with other series as well (just as liquidity is). In particular, they have strong associations with the CDX index and the T bill rate, though much of the latter turns out to be driven by the COVID-19 observations. In any case, these correlations are suggestive that a significant portion of the comovement across different funding terms and asset classes may be driven by the common component of liquidity.

5.2 Funding demand and dealer condition

Returning to Tables 5 and 6, we note two further significance patterns. First, stronger demand for securities financing is significantly associated with tighter financing spreads.

The interpretation of this result is that dealers respond to increased demand by increasing their margins on lending activity. In other words, the supply of lending is at least somewhat inelastic, although the economic significance of these coefficients is relatively modest.[17]

Second, deteriorations in dealer equity levels are significantly associated with higher financing spreads and haircuts. This result suggests that dealers tighten terms to protect capital in times when their balance sheets become more fragile. The coefficients are marginally economically significant—a one-standard-deviation decline in equity is associated with about a change in financing spreads or haircuts of only about 0.15 standard deviations, according to the results in Table 6. (These numbers are a bit stronger in the sample that excludes the COVID observations.) The responsiveness of haircuts to dealer condition also holds when we measure dealer condition using changes in the leverage ratio, asset value, and dealer excess CDS spreads, rather than equity. (See Appendix Table A.2.). The statistical significance of the responses of other terms to these alternative measures is somewhat sensitive to specification, but in nearly every case where the coefficient is statistically significant it is consistent with dealers tightening terms in response to a deterioration in their own condition.[18]

Together, tightening of terms that we observe in response to both demand and dealer deterioration is consistent with dealer balance-sheet capacity having an effect on securities-financing conditions, as it has been argued to have on cash securities markets in papers such as He and Krishnamurthy (2013) and Adrian et al. (2014).

5.3 Other risk measures

Although the Treasury bill rate (an indicator of the overall state of the business cycle) appears consistently with a significant negative sign, measures of asset-market volatility and credit risk are not generally important in these regressions. The CDX index and volatility measures have coefficients that are almost always small and insignificant, which is particularly notable in light of their fairly strong *unconditional* correlations with funding terms. Evidently, given

[17] In the sample excluding the COVID-19 crisis, the demand coefficient is statistically significant with a *negative* sign in the regressions for maximum amounts and maximum maturities. This could be consistent with dealers expanding the amount of leverage they are willing to provide in response to higher demand, even as they also increase the rate charged to provide that leverage.

[18] The exception is that maximum amounts appear to respond negatively and significantly to excess CDS spreads in the pooled models and the full sample. However, this result is due entirely to the inclusion of the volatile Q2 2020 observation.

liquidity conditions, funding terms are relatively insensitive to market volatility and credit risk. The lack of a consistent relationship between haircuts and volatility is particularly striking, as most theoretical models predict that haircuts should depend strongly on the tails of the distribution of the collateral value (e.g., Geanakoplos, 2010; Gromb and Vayanos, 2002).[19] The lack of significance is robust to alternative specifications that measure risk and volatility using different variables and omit the Treasury bill rate from the model. (See Appendix table A.3.)

6 Causality between Funding and Market Liquidity

6.1 Self-reported reasons for changing terms

Although the regressions in Table 5 isolate partial correlations, the direction of causality between securities-financing terms and the right-hand-side variables may go in both directions. In particular, one might think that the tightness of funding conditions has an adverse effect on securities-market liquidity rather than the other way around.

One way of ascertaining why dealers change their securities-financing terms is simply to ask them. Indeed, the SCOOS does exactly this, soliciting the most-important reasons for tightening and easing terms in each quarter. Specifically, for dealers who report tightening of either price or nonprice terms, the SCOOS asks questions like the following, by counterparty type:

> *To the extent that the price or nonprice terms applied to hedge funds have tightened or eased over the past three months ... what are the most important reasons for the change?*
>
> *Possible reasons for tightening:*
>
> __ *Deterioration in current or expected financial strength of counterparties.*
> __ *Reduced willingness of your institution to take on risk*
> __ *Adoption of more-stringent market conventions*
> __ *Higher internal treasury charges for funding*
> __ *Diminished availability of balance sheet or capital at your institution*

[19] This absence of such a relationship in our data is, however, consistent with the findings of Baklanova et al. (2017).

__ *Worsening in general market liquidity and functioning*
__ *Less-aggressive competition from other institutions.*

Possible reasons for easing:
__ *Improvement in current or expected financial strength of counterparties.*
__ *Increased willingness of your institution to take on risk*
__ *Adoption of less-stringent market conventions*
__ *Lower internal treasury charges for funding*
__ *Increased availability of balance sheet or capital at your institution*
__ *Improvement in general market liquidity and functioning*
__ *More-aggressive competition from other institutions.*

Only dealers who report a change in their terms answer these questions. Since 2012, they have been asked to select the first, second, and third most-important reasons from the above lists of seven. (There is also an "other" option available, but it is rarely used and we disregard it.) Prior to 2011 Q3, rather than selecting a top three, dealers were asked to rate each possible reason for changing terms as "very important," "somewhat important," or "not important." However, it turns out that the number of reasons that dealers listed as "very important" always averaged about three. Thus, for our purposes, we take "top-three reason" and "very important reason" to be synonymous, and we splice the series together.

Dealers provide this information for each of several different counterparty types, including hedge funds, non financial companies, and insurance companies since the survey began and several others since it was revised in 2011.[20] We note that the "terms" being asked about in these questions cover those on both securities financing and OTC derivative activity.

Table 10 shows how often each reason is listed as a top-three (or "very important") reason for changing terms. The frequencies of reasons for changing terms are fairly consistent across counterparty types. For all counterparties, "competition from other institutions" is the most-frequently cited reason for changing terms. While this rationale may make perfect sense from the perspective of an individual dealer, it is not a satisfying explanation for aggregate fluctuations in terms, given that there are not large changes in the market structure of the broker-dealer industry from quarter to quarter. Changes in "competition" likely reflect

[20] Prior to the revision, the hedge fund category also included "other asset managers."

dealers observing each other tightening and easing terms, the ultimate cause of which is one of the other reasons listed. Apart from competition, dealers generally cite market liquidity as the most common reason for changing terms. This is consistent with the strong correlation shown above between terms and liquidity, as measured both by the SCOOS and by external market measures.

To measure the importance of the various motivations for changing terms across time, we construct the variables

$$x_{k,l,t} = \frac{\#_{\mathrm{t}} \text{ tighten to cntrprty } l \text{ for reason } k - \#_{\mathrm{t}} \text{ ease to cntrprty } l \text{ for reason } k}{\text{total respondents}_t} \tag{2}$$

for each of the seven reasons and six counterparty types listed in the SCOOS. To conserve degrees of freedom in the exercises below, we create an aggregate index of the importance of each reason by averaging the $x_{k,l,t}$ series across the three counterparty types that have existed over the entire life of the SCOOS. We denote these indices as $\bar{x}_{k,t}$.

We then run the regressions

$$\tau_{i,j,t} = a_{i,j} + \sum_k \beta_{i,j,k} \bar{x}_{k,t} + e_{i,j,t} \tag{3}$$

for each (i, j) pair, where, as before, i indexes the type of term (spread, haircut, etc.) and j indexes the asset class. These regressions parse the changes in financing terms that we observe into their causes, with the coefficients $\beta_{i,j,k}$ indicating how often dealers change each term on each asset class when they change terms in general for each particular reason. The value of this regression is that it will allow us to conduct the counterfactual exercise of "shutting down" individual motivations for changes in terms. In particular, we will be able to estimate what funding terms would have looked like if dealers had never viewed liquidity as an important reason for changing them.[21]

While equation (3) is primarily an intermediate step to the next stage of our analysis, the results themselves are also of some interest. Table 10 reports the t statistics on the $\beta_{i,j,k}$ coefficients. The regressions generally fit well—across the 24 models, the average adjusted

[21] We also ran these regressions using only the important reasons series $x_{k,l,t}$ for hedge funds, instead of our aggregated series $\bar{x}_{k,t}$, and obtained similar results.

R^2 is 71%—suggesting that the list of reasons for changing terms covers most of what dealers find important. Although mutlicollinearity makes it difficult to discern the precise patterns, the variable that turns out to be statistically significant most often across terms and asset classes is the fraction of dealers reporting that market liquidity is important. Thus, when more dealers report that liquidity was an important reason for changing terms, more dealers also report actual changes in terms. This is not necessarily so for the other possible "reasons." For example, competition, which was the most frequently cited reason for changing terms overall, is rarely significant in these regressions. (This supports our argument above that "competition" cannot really be the ultimate cause of fluctuations in terms.) Liquidity is also generally the most *economically* significant of the $\bar{x}_{k,t}$ indices. Across all 24 regressions, the coefficient on liquidity importance (not shown in the table) averages 1.00, while the coefficients on the other six reasons average just 0.09.

These results suggest that at least some of the partial correlation between liquidity and financing terms that was demonstrated above reflects dealers changing their terms in response to market liquidity. Of course, it is still possible that the causality could run the other way too. We turn to this question next.

6.2 Do funding conditions affect liquidity?

To examine the reverse direction of causality, we try to answer the question: "When dealers change terms for reasons *other* than liquidity, how is liquidity affected?" To do this, we use the results in Table 10 to construct "liquidity controlled" versions of each of the securities-financing terms series. Specifically, we generate predicted values for each term, for each asset class, in each quarter, counterfactually supposing that liquidity was never an important reason for changing terms. We construct these variables in two ways:

$$\tilde{\tau}^{(1)}_{i,j,t} = \hat{a}_{i,j} + \sum_{k \neq \text{liq.}} \hat{\beta}_{i,j,k} x_{k,t} \tag{4}$$

$$\tilde{\tau}^{(2)}_{i,j,t} = \hat{a}_{i,j} + \sum_{k \neq \text{liq.}} \hat{\beta}_{i,j,k} x_{k,t} + \hat{e}_{i,j,t} \tag{5}$$

where "hats" denote the OLS estimates from equation (3). These series represent the changes in financing terms that would have occurred if dealers had never considered liquidity to be an important factor. The difference between (4) and (5) is whether the counterfactual series includes the residual $\hat{e}_{i,j,t}$ from the first stage. It makes sense to include this term if there are important reasons for changing terms that are omitted from the SCOOS list. On the other hand, if the residual simply reflects noise in the series one would want to exclude it from the counterfactual. Since it is not clear which interpretation is correct, we do it both ways.

We then regress the SCOOS liquidity variable on the liquidity-controlled financing terms:

$$\lambda_{j,t} = \gamma_j^{(1)} + \sum_i \delta_{i,j}^{(1)} \tilde{\tau}_{i,j,t}^{(1)} + \boldsymbol{\zeta}^{(1)\prime} \mathbf{z}_{j,t} + u_{i,j,t}^{(1)} \tag{6}$$

$$\lambda_{j,t} = \gamma_j^{(2)} + \sum_i \delta_{i,j}^{(2)} \tilde{\tau}_{i,j,t}^{(2)} + \boldsymbol{\zeta}^{(2)\prime} \mathbf{z}_{j,t} + u_{i,j,t}^{(2)} \tag{7}$$

where $\mathbf{z}_{j,t}$ is a vector of control variables. We run the regressions pooling across all six asset classes where the liquidity terms exist. We use the same time-series control variables as in the previous regressions.[22]

Table 12 presents the results. At first glance, there is some evidence that terms matter for liquidity—at least some of the liquidity-controlled terms show up as negative and significant. It is somewhat surprising that maximum maturity seems to be the term type that matters most, but the high degree of comovement between the terms may be obscuring the underlying patterns. When we drop maximum maturity (not shown) some of the other terms show up as significant with little loss in explanatory power.

In any case, regardless of specification, the joint statistical and economic significance of the liquidity-controlled terms is small. To see this more clearly, we construct estimates of the total effect of terms on liquidity in each period for each asset class. That is, we compute the quantities $\sum_i \delta_{i,j}^{(1)} \tau_{i,j,t}$ and $\sum_i \delta_{i,j}^{(2)} \tau_{i,j,t}$. Since the $\delta^{(1)}$ and $\delta^{(2)}$ coefficients are estimates of the causal effect of terms on liquidity, purged of the endogeneity resulting from reverse causality, these series represent unbiased estimates of the joint effect of changes in funding terms at each observation. By subtracting them from the observed liquidity series, we can construct counterfactual liquidity series that reflect what market conditions would have looked like if

[22] We also ran these regressions for each asset class individually. Not surprisingly, given the small sample size, the coefficients were generally insignificant. We cannot use the pooled models with time fixed effects in this exercise, because, as discussed in Section 5.1.2, that model sweeps out the common component of liquidity, which is of interest here.

funding terms had been constant.

The top panels in Figure 3A and 3B plot the counterfactual liquidity series, with 95% confidence intervals, against the observed liquidity series. The bottom panel plots the estimated effect of terms (the difference between the two series in the top panels.) It is clear from the figure that, in most periods for most asset classes, there is no meaningful difference between the actual and counterfactual liquidity series, whether or not the difference is statistically significant. In other words, funding conditions have little effect on market liquidity most of the time. However, there are two notable exceptions to this finding. The first is the behavior of the investment-grade corporate bond series in 2010. For that period, the model suggests that the easing of terms may have played an important role in the improvement of liquidity conditions in the corporate bond market. Unfortunately, this is the only risky asset class for which the SCOOS provided liquidity data during this period, so we do not know whether a similar result would have been found for high-yield bonds or private-label structured products. The second episode is the last observation, associated with the COVID-19 crisis. In this period, we estimate the effect of terms to be negative, significant, and large for all asset classes other than agency MBS.[23] Evidently, funding conditions contributed to the deterioration in liquidity in these markets during the turmoil of this period. Indeed, though there is some variation across models and asset classes, overall we estimate that the tightening of funding terms was responsible for approximately half of the decline in our liquidity metric among risky security types during the COVID-19 quarter.

Outside of these episodes, the results suggest that securities financing has not played a large role in supporting or hampering market liquidity over the post-GFC period. The strong associations between funding terms and liquidity that were evident in Tables 4 and 5 can be explained almost entirely by dealers' reactions to liquidity conditions, rather than the other way around.

7 Do funding conditions affect asset prices?

Finally, we ask whether there is any relationship between financing conditions and asset prices. Table 4 illustrated moderate unconditional correlations between terms and security

[23]The observed deterioration in corporate-bond liquidity is consistent with other studies that have examined this period, such as Kargar, Lester, Lindsay, Liu, and Weill (2020).

returns. Table 13 examines these relationships controlling for other factors. Specifically, we regress asset returns across asset classes on each of the financing terms and the same vector of control variables used in Table 5. Given the strong collinearity between the four terms, we run a separate model for each asset-class/term pair. We omit private-label MBS from this analysis because we do not have a return series for that asset class, and we omit equities because we cannot control for liquidity conditions in that asset class.[24] We also consider models pooling across the five asset classes. As before, we run the pooled model using both the vector of time-series controls and quarterly fixed effects.

Although funding terms appear as statistically significant in only two of the 20 asset-class-level regressions, they obtain significance at the 5% level with the expected negative sign in some of the pooled specifications. The significant coefficients are in the range of -3 to -4, implying that when the net fraction of dealers tightening terms increases by 10 percentage points, asset prices decline by 30 to 40 basis points on average. While these results are somewhat sensitive to specification, they are robust to the exclusion of the Covid-19-related observations from the sample (see Appendix Table A.4).[25] We also obtained similar results when we used the "liquidity controlled" terms that we constructed in the previous section in place of the actual terms (not shown).

As with the effects of funding terms on liquidity, these are generally economically small effects. However, during the COVID-19 quarter, they imply asset-price declines of roughly 1.5 to 2% due to the extreme term tightening. For comparison, the total net changes in our asset-price indices ranged from +3% (agency MBS) to -9% (high-yield corporate bonds) during this quarter. Thus, again, there is some evidence that funding conditions can have substantial effects on cash asset markets during periods of very high market stress.

8 Conclusion

This paper has presented new evidence on the workings of the bilateral, dealer-to-client securities-financing market, and important source of leverage for hedge funds and other

[24]When we run the models for equities omitting the liquidity variable, we do not find any significance of funding terms.

[25]The regressions have R^2s as high as 80%, but this explanatory power comes almost entirely from the control variables. In particular, changes in the CDX and swap volatility, not reported in the table, are frequently significant at the 1% level.

securities market participants. By exploiting information from the Senior Credit Officer Opinion Survey, we demonstrate several facts about this market that have not previously been systematically documented. Although the SCOOS data have certain limitations, they are the only source of data to cover dealer-to-client financing across a variety of asset classes and encompassing the bulk of the activity in the market. We thus add new evidence on this important segment of the short-term funding complex, complementing studies on other pieces of the repo market such as Gorton and Metrick (2012a), Krishnamurthy, Nagel, and Orlav (2014), and Copeland, Martin, and Walker (2014).

Our main findings are that, during the 2010 - 2020 period, different funding terms generally moved together with each other, and that these movements were highly correlated with broad conditions in the underlying securities markets. In particular, cash-market liquidity appears to have been the most important determinant of how terms were set. Our results present some challenges for theoretical work on securities financing. In papers such as Geanakoplos (2010), Garleanu and Pedersen (2011), Araujo, Kubler, and Schommer (2012), and Fostel and Geanakoplos (2015), financing spreads are either constant or are negatively related to haircuts. In other models, the terms that dealers set on securities financing depend largely on volatility and credit risk. Meanwhile, very few theoretical models explicitly incorporate position or maturity limits. In contrast, our results suggest that adjustments to financing terms are driven primarily by liquidity, that fluctuations in liquidity drive *all* types of financing terms, and that these moves are almost always in the same direction. We also find that funding demand and dealer financial condition are significant, though less important, determinants of funding terms, results that are consistent with the importance of dealer balance-sheet constraints.

We find little evidence that changes in financing terms have been important for liquidity or asset returns during most of the post-GFC period, though they do seem to have played a significant role for riskier asset classes during the COVID-19 crisis. Broadly speaking, these findings support models of the repo market, such as Brunnermeier and Pedersen (2009), in which funding conditions are typically not binding but can have important effects during periods of extreme market stress.

References

Acharya, V., and S. Oncu (2011): "The Repurchase Agreement (Repo) Market," in *Regulating Wall Street: The Dodd-Frank Act and the New Architecture of Global Finance*, pp. 319–350. John Wiley Sons.

Adrian, T., B. Begalle, A. Copeland, and A. Martin (2014): "Repo and Securities Lending," in *Risk Topography: Systemic Risk and Macro Modeling*, pp. 131–148. NBER, University of Chicago Press.

Adrian, T., E. Etula, and T. Muir (2014): "Financial Intermediaries and the Cross-Section of Asset Returns," *Journal of Finance*, 69(6), 2557–2596.

Adrian, T., and H. S. Shin (2014): "Procyclical Leverage and Value at Risk," *Review of Financial Studies*, 27, 373–403.

Amihud, Y. (2002): "Illiquidity and Stock Returns: Cross Section and Time-Series Effects," *Journal of Financial Markets*, 5(1), 31–56.

Anbil, S., A. Anderson, and Z. Senyuz (2021): "Are Repo Markets Fragile? Evidence from September 2019," FEDS Working paper 2021-028.

Araujo, A., F. Kubler, and S. Schommer (2012): "Regulating Collateral-Requirements when Markets Are Incomplete," *Journal of Economic Theory*, 147, 450–476.

Ashcraft, A., N. Garleanu, and L. H. Pedersen (2011): "Two Monetary Tools: Interest Rates and Haircuts," *NBER Macroeconomics Annual 2010*, 25, 143–180.

Auh, J. K., and M. Landoni (2016): "Loan Terms and Collateral: Evidence from the Bilateral Repo Market," Working paper.

Baklanova, V., C. Caglio, M. Cipriani, and A. Copeland (2019): "The Use of Collateral in Bilateral Repurchase and Securities Lending Agreements," *Review of Economic Dynamics*, 33, 228–49.

Baklanova, V., A. Copeland, and R. McCaughrin (2015): "Reference Guide to U.S. Repo and Securities Lending Markets," FRB New York Staff Report No. 740.

Barsky, R., T. Bogusz, and M. Easton (2016): "Interest Rates or Haircuts? Prices versus Quantities in the Market for Collateralized Risky Loans," FRB Chicago Working paper 2016-19.

Bartolini, L., S. Hilton, S. Sundaresan, and C. Tonetti (2011): "Collateral Values by Asset Class: Evidence from Primary Securities Dealers," *Review of Financial Studies*, 24(1), 248–278.

Brunnermeier, M. (2009): "Deciphering the Credit Crunch," *Journal of Economic Perspectives*, 23(1), 77–100.

Brunnermeier, M., and L. H. Pedersen (2009): "Market Liquidity and Funding Liquidity," *Review of Financial Studies*, 22(6), 2201–2238.

CGFS (2010): "The Role of Margin Requirements and Haircuts in Procyclicality," Committee on the Global Financial System, CGFS Paper 36, Bank for International Settlements.

Chordia, T., A. Sarkar, and A. Subrahmanyam (2005): "An Empirical Analysis of Stock and Bond Market Liquidity," *Review of Financial Studies*, 18(1), 85–129.

Copeland, A., I. Davis, E. LeSueur, and A. Martin (2012): "Mapping and Sizing the U.S. Repo Market," *Liberty Street Economics*.

Copeland, A., A. Martin, and M. Walker (2014): "Repo Runs: Evidence from the Tri-Party Repo Market," *Journal of Finance*, 69(6), 2343–2380.

Eichner, M. J., and F. Natalucci (2010): "Capturing the Evolution of Dealer Credit Terms Related to Securities Financing and OTC Derivatives: Some Initial Results from the New Senior Credit Officer Opinion Survey on Dealer Financing Terms," FEDS Working Paper 2010-47.

Fostel, A., and J. Geanakoplos (2015): "Leverage and Default in Binomial Economies," *Econometrica*, 83(6), 2191–2229.

Garleanu, N., and L. H. Pedersen (2011): "Margin-Based Asset Pricing and the Law of One Price," *Review of Financial Studies*, 24(6), 1980–2022.

GEANAKOPLOS, J. (2010): "The Leverage Cycle," *NBER Macroeconomics Annual 2009*, 24, 1–65.

GILCHRIST, S., AND E. ZAKRAJSEK (2012): "Credit Spreads and Business Cycle Fluctuations," *American Economic Review*, 102(4), 1692–1720.

GORTON, G. B., AND A. METRICK (2012a): "Securitized Banking and the Run on Repo," *Journal of Financial Economics*, 104, 425–51.

——— (2012b): "Who Ran on Repo?," NBER Working Paper 18455.

GORTON, G. B., AND G. G. PENNACCHI (1995): "Banks and Loan Sales: Marketing Nonmarketable Assets," *Journal of Monetary Economics*, 35(3), 389–411.

GROMB, D., AND D. VAYANOS (2002): "Equilibrium and Welfare in Markets with Financially Constrained Arbirageurs," *Journal of Financial Economics*, 66, 361–407.

HE, Z., AND A. KRISHNAMURTHY (2013): "Intermediary Asset Pricing," *American Economic Review*, 103(3), 732–70.

HU, G. X., J. PAN, AND J. WANG (2018): "Tri-Party Repo Pricing," Working Paper.

IVASHINA, V., AND D. SCHARFSTEIN (2010): "Loan Syndication and Credit Cycles," *American Economic Review, Papers & Proceedings*, 100(2), 57–61.

KARGAR, M., B. R. LESTER, D. LINDSAY, S. LIU, AND P.-O. WEILL (2020): "Corporate Bond Liquidity during the COVID-19 Crisis," CEPR Discussion Paper DP15231.

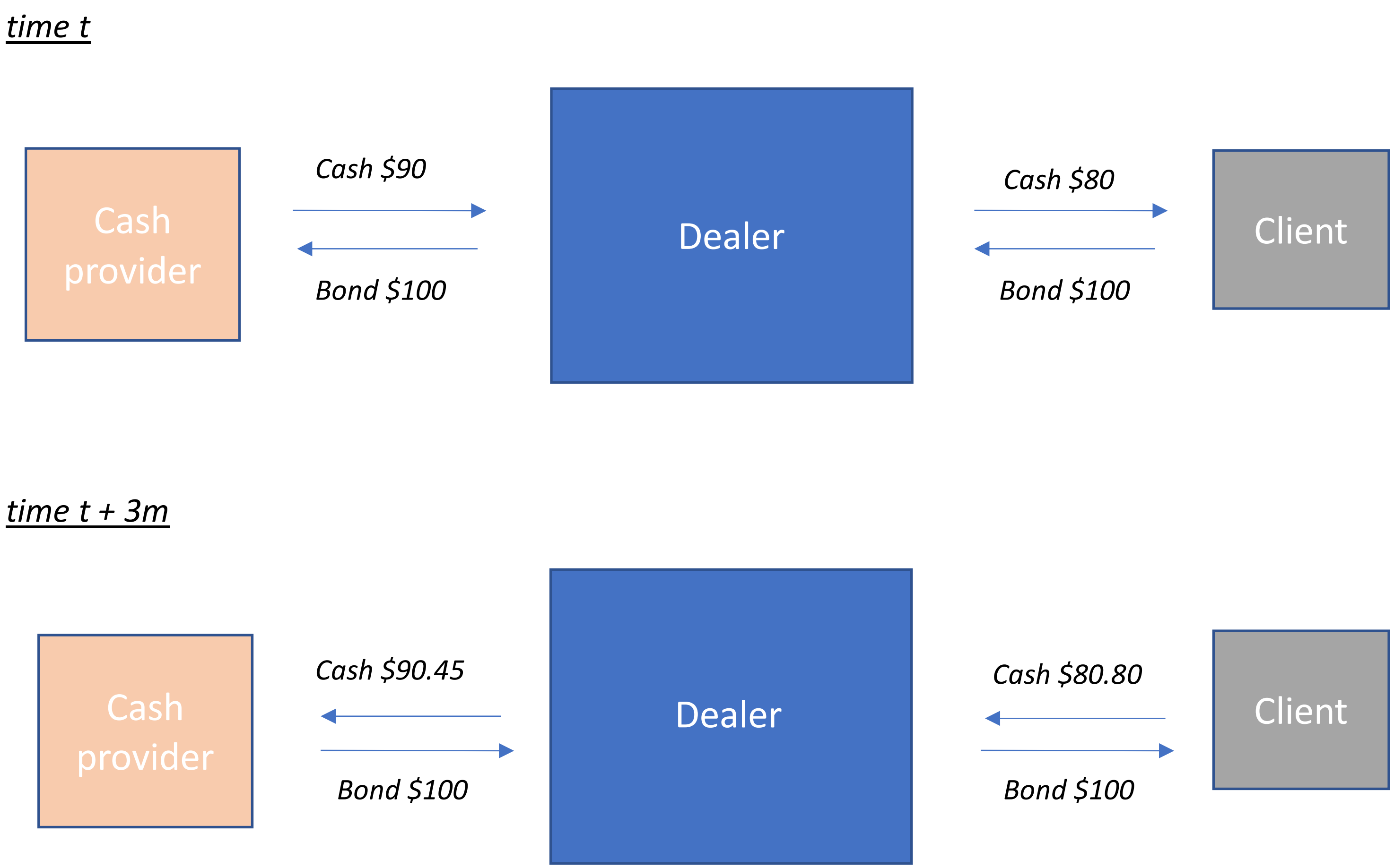
KRISHNAMURTHY, A., S. NAGEL, AND D. ORLAV (2014): "Sizing up Repo," *Journal of Finance*, 69(6), 2381–2417.

LOWN, C., AND D. P. MORGAN (2006): "The Credit Cycle and the Business Cycle: New Findings Using the Loan Officer Opinion Survey," *Journal of Money, Credit, and Banking*, 38(6), 1575–1597.

MACCHIAVELLI, M., AND X. ZHOU (2019): "Funding Liquidity and Market Liquidity: The Broker-Dealer Perspective," Working paper.

Martin, A., D. Skeie, and E.-L. von Thadden (2014): "Repo Runs," *Review of Financial Studies*, 27(4), 957–989.

Figure 1. Example of a Securities Financing Transaction



Tri-party Terms

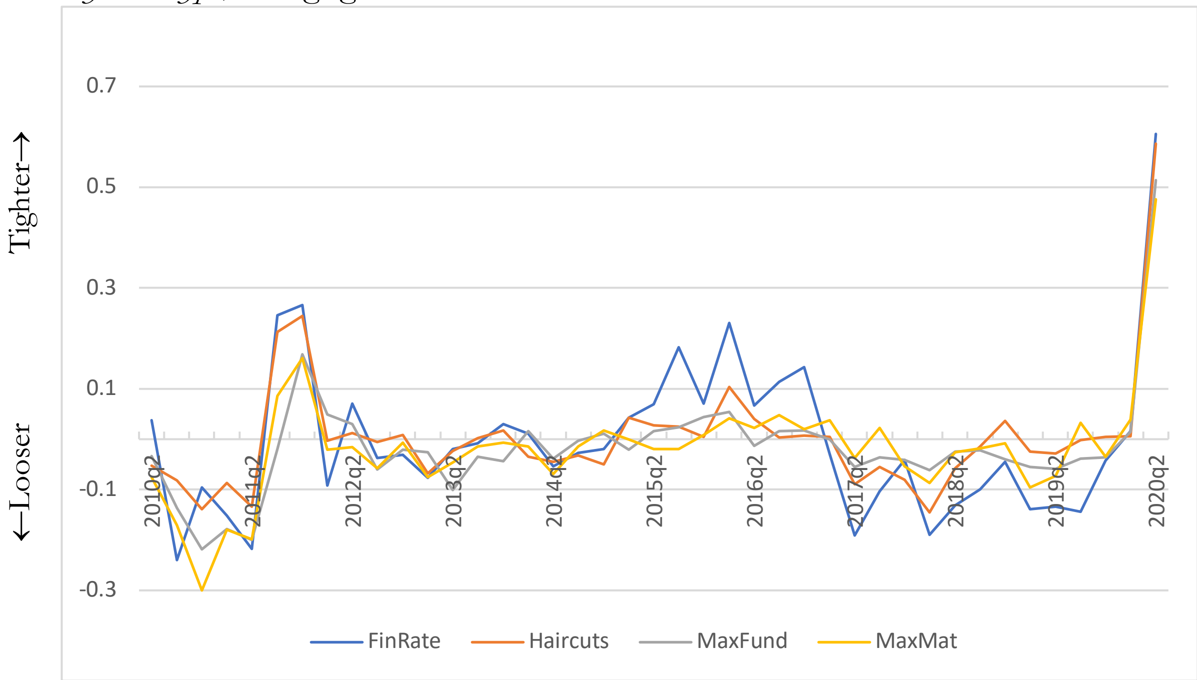
- Financing rate: 2.0%
- Haircut: 10%
- Maturity: *3m*
- Amount: $90

Bilateral Terms

- Financing rate: 4.0%
- Haircut: 20%
- Maturity: *3m*
- Amount: $80

Figure 2. Changes in SCOOS terms

A. By term type, averaging across all asset classes



B. By asset class, averaging across terms

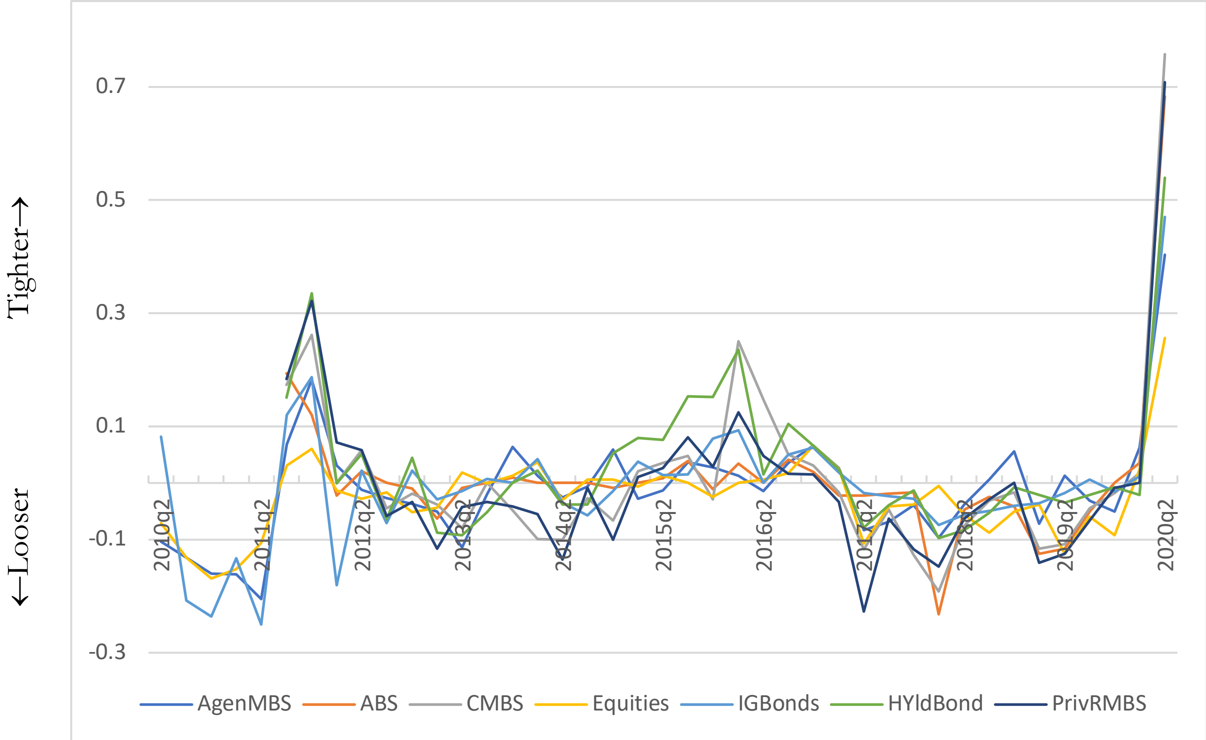
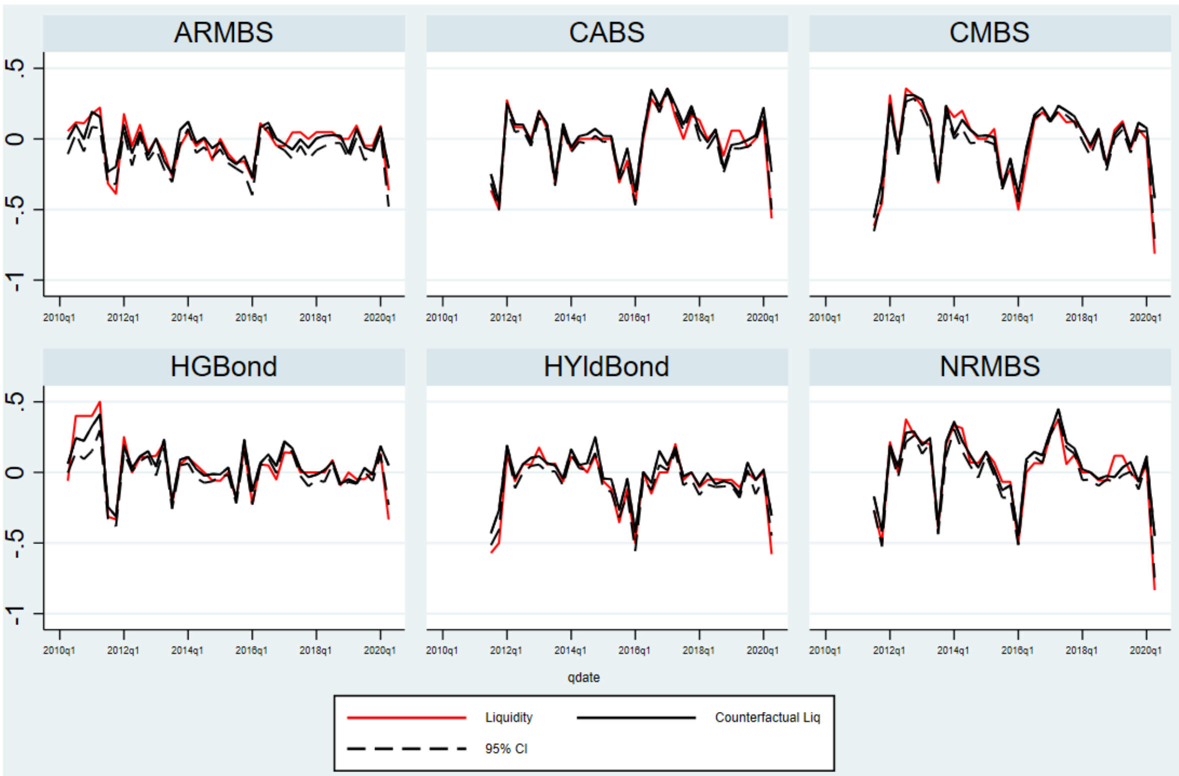


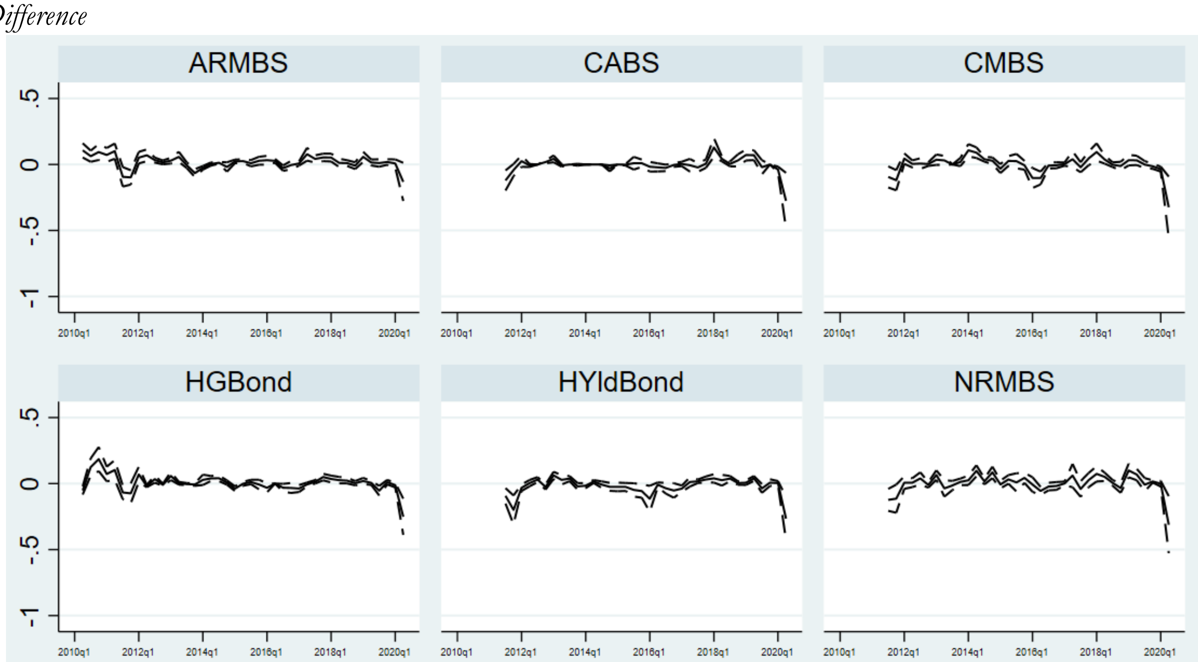
Figure 3. Estimated effects of funding terms on SCOOS liquidity series

A. First stage-residual excluded from liquidity-controlled funding terms

Levels

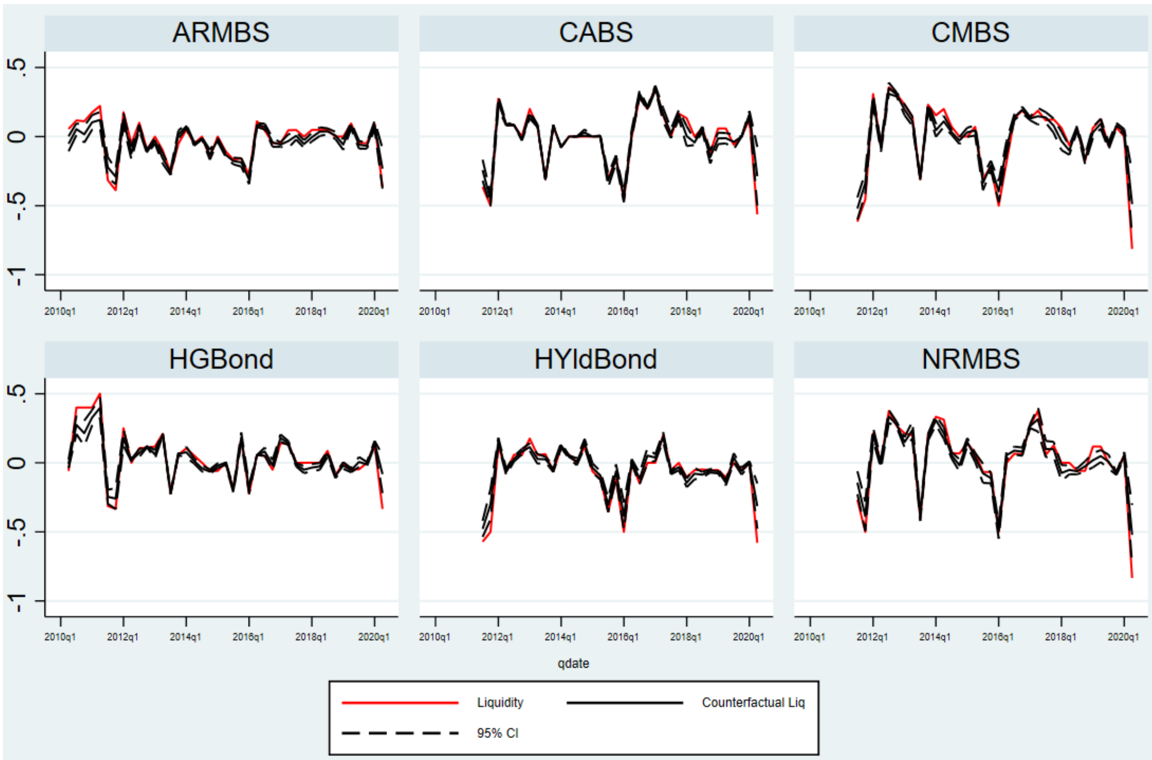


Difference

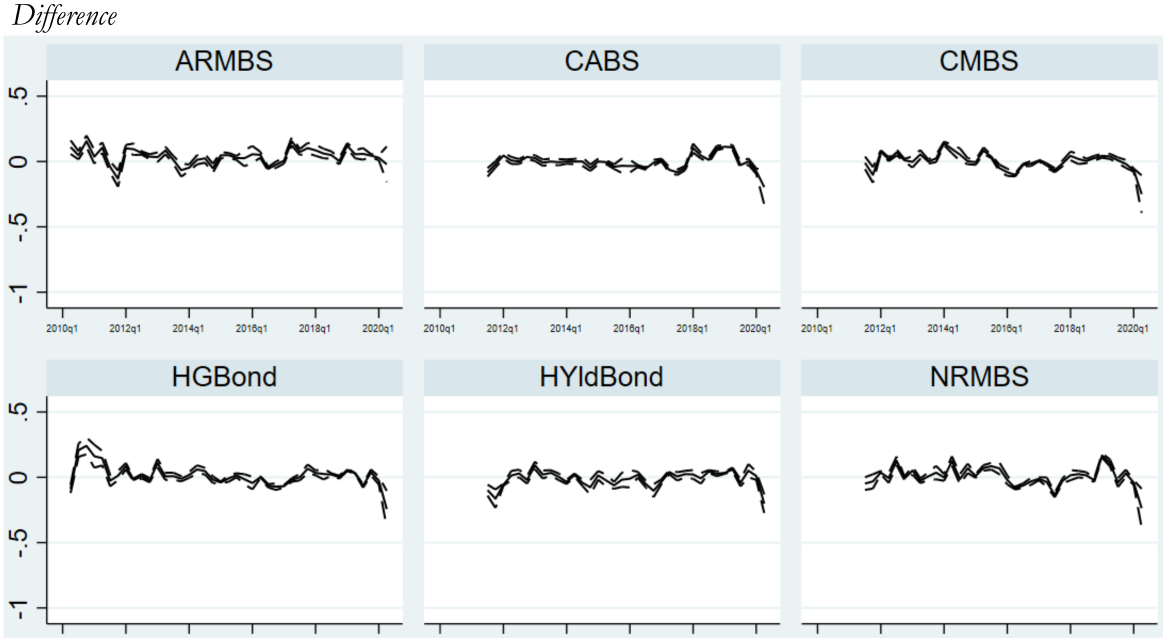


B. First stage-residual included in liquidity-controlled funding terms

Levels



Difference



Notes: The solid lines show the difference between the SCOOS liquidity series (net fraction of dealers reporting improvements in liquidity and market functioning) and the predicted values of these series based on an exercise using equations (8) and (9), in which we counterfactually impose that securities financing terms did not change. Dashed lines show two-standard-deviation confidence bands.

Table 1. Asset-specific data sources

	Agency MBS	IG Corporate	HY Corporate	Consumer ABS	CMBS	Private MBS	Equities
Returns & realized vol.	Bloomberg Barclays US MBS Index[a]	Bloomberg Barclays US IG Corp. Bond Index[a]	Bloomberg Barclays US Corp. HY Bond Index[a]	Bloomberg Barclays US Agg ABS Index[a]	Bloomberg Barclays US CMBS IG Index[a]	--	S&P 500
Issuance	SIFMA	SIFMA	SIFMA	SIFMA	SIFMA	SIFMA	FOF
Trading volume	SIFMA	SIFMA	SIFMA	SIFMA	SIFMA	SIFMA	NYSE
Financing volume	FR-2004	FR-2004[b]	FR-2004[b]	FR-2004[c] (2015Q1)	FR-2004[c] (2013Q2)	FR-2004[c] (2013Q2)	FR-2004 (2013Q2)
Fails to deliv.	FR-2004	FR-2004[b]	FR-2004[b]	--	--	--	--
Amihud liquidity	--	TRACE	TRACE	--	--	--	--
Tri-party data	FRBNY (2010Q3)	FRBNY (2010Q3)	FRBNY (2010Q3)	FRBNY (2010Q3)	--	FRBNY (2010Q3)	FRBNY (2010Q3)

Notes: The table reports sources of for the asset-class-specific data series that we match to the SCOOS. Dates in parentheses indicate the first date at which the data are available, if the first date is later than 2010Q2. "--" indicates that no data series exists.

[a] Used with permission of Bloomberg.
[b] FR-2004 data is available for corporate bonds as a whole, but is not separated by credit rating.
[c] Beginning in 2013Q2, the FR-2004 reports an "other" category of securities financing that includes structured-finance products. Beginning in 2015Q1, ABS are split out separately.

Table 2. Alternative measures of terms volatility

		Financing spread	Haircut	Max. amount	Max. maturity
Stdev – Unweighted Index	Ave.	0.18	0.14	0.13	0.12
	MF	0.17	0.14	0.12	0.12
Stdev – Weighted Index	Ave.	0.21	0.18	0.15	0.14
	MF	0.20	0.17	0.14	0.14
RMSC – Unweighted Index	Ave.	0.18	0.14	0.13	0.12
	MF	0.17	0.14	0.12	0.12
RMSC – Weighted Index	Ave.	0.21	0.18	0.15	0.14
	MF	0.20	0.17	0.14	0.14
% dealers changing terms	Ave.	0.19	0.10	0.14	0.09
	MF	0.18	0.11	0.10	0.10
Corr: Ave vs MF (unweighted)		0.95	0.95	0.89	0.91
Corr: Ave vs MF (weighted)		0.95	0.97	0.91	0.93
Corr: weighted vs. unweighted (ave.)		0.98	0.98	0.99	0.98
Corr: weighted vs. unweighted (MF.)		0.98	0.98	0.98	0.99

Notes: The top portion of the table reports various measures of the volatility of securities-financing terms, as constructed from SCOOS responses. The bottom portion shows the correlation between the various measures. "Ave." and "MF" refers to terms applied to "average" and "most favored" clients. Each statistic is computed within each asset class and then averaged across asset classes. Units are percentage of dealers changing terms in each quarter.

Table 3. Term volatility across asset classes

	Financing spread	Haircut	Max. amount	Max. maturity
Agency MBS	0.13	0.11	0.11	0.10
IG corporate bonds#	0.16	0.12	0.10	0.13
HY corporate bonds	0.18	0.15	0.10	0.11
ABS#	0.19	0.15	0.13	0.11
CMBS#	0.21	0.18	0.15	0.14
Private MBS#	0.22	0.19	0.15	0.14
Equities	0.11	0.04	0.09	0.09

Notes: Uses unweighted indices, averaged across average and most-favored clients. Units are percentage of dealers changing terms in each quarter. Data for asset classes with #'s begin in 2011:3; all others begin in 2010:2.

Table 4. Correlations of changes in financing terms

A. By term type, aggregating across all asset classes

	SCOOS Terms				Liquidity				Volatility				Other Asset-Specific Market Conditions		
	Fin. Spread [1]	Haircut [2]	Max. mat. [3]	Max. amt. [4]	SCOOS Liquidity [5]	Amihud liquidity [6]	TED Spread [7]	5 Year On/Off [8]	Real. vol. [9]	VIX [10]	Swaption vol [11]	MOVE [12]	Returns [13]	Trading volume [14]	Issuance [15]
Fin. spread	1				-0.72***	0.26***	0.29***	0.48***	0.18***	0.36***	0.20***	0.13**	-0.26***	-0.09	0.02
Haircut	0.82***	1			-0.70***	0.20**	0.27***	0.45***	0.13**	0.27***	0.11*	0.07	-0.16**	-0.09	0.01
Max. amt.	0.72***	0.77***	1		-0.60***	0.20**	0.24***	0.39***	0.10	0.19***	0.03	-0.04	-0.20***	-0.04	0.04
Max. matur.	0.72***	0.81***	0.83***	1	-0.65***	0.31***	0.25***	0.39***	0.16**	0.25***	0.09	0.04	-0.17***	-0.06	-0.07

B. By asset class, aggregating across all terms

	Liquidity				Volatility				Other Asset-Specific Market Conditions		
	SCOOS Liquidity	Amihud liquidity	TED Spread	5 Year On/Off	Real. vol.	VIX	Swaption vol	MOVE	Returns	Trading volume	Issuance
Agency MBS	-0.57***	-	0.12	0.38***	-0.01	0.22***	0.08	-0.00	0.10	-0.03	-0.14*
IG Corp	-0.70***	0.45***	0.28***	0.48***	0.41***	0.38***	0.19**	0.22***	-0.27***	0.35***	-0.05
HY Corp	-0.73***	0.42***	0.31***	0.52***	0.48***	0.27***	0.14*	0.07	-0.54***	-0.01	-0.20**
ABS	-0.53***	-	0.26***	0.39***	-0.08	0.29***	0.03	-0.00	0.10	-0.17**	-0.28***
CMBS	-0.71***	-	0.29***	0.46***	0.15*	0.29***	0.15*	0.06	-0.05	-0.22***	-0.16*
Priv. RMBS	-0.71***	-	0.38***	0.47***	-	0.25***	0.13	0.03	-	0.10	-0.17**
Equities	-	-	0.19**	0.33***	0.23***	0.25***	0.09	0.06	-0.29***	0.09	0.01

Notes: The tables show the correlations of quarterly changes in four types of securities financing terms (financing spreads, haircuts, maximum maturities, and maximum amounts), as measured using SCOOS diffusion indices, with various other data from the SCOOS and other sources. In the top panel, correlations are calculated treating each asset class-quarter as a separate observation. In the bottom panel, correlations are calculated treating each term-quarter as a separate observation. Shaded columns are time-series data matched as closely as possible to the SCOOS reporting dates; all other columns are matched to the SCOOS by both date and asset class. Asterisks indicate statistical significance at the 10%, 5%, and 1% level.

Table 4. Correlation of changes in financing terms (continued)

A. By term type, aggregating across all asset classes (continued)

	Securities Financing					Dealer Condition					Other Financial Indicators					
	Funding Demand [16]	"Securities in"(a) [17]	Fails to deliv. [18]	Triparty volume [19]	Triparty haircuts [20]	Excess CDS [21]	Leverage [22]	%Δ Book Equity [23]	%Δ Assets [23]	%Liq. Assets [24]	3-Month Tbill [25]	10 Year Treasury [26]	CDX.IG [27]	CDX.HY [28]	GZ Bond Premium [29]	Chicago FCI [30]
Fin. Rate	0.19***	-0.10	0.10	-0.02	0.04	0.23***	-0.11*	-0.20***	-0.35***	0.13**	-0.50***	-0.28***	0.55***	0.64***	0.43***	0.59***
Haircut	0.18***	-0.14*	-0.08	0.01	-0.03	0.25***	-0.00	-0.12*	-0.18***	0.33***	-0.62***	-0.41***	0.48***	0.63***	0.45***	0.61***
Max. amt.	0.08	-0.23***	0.02	-0.09	-0.02	0.08	-0.12**	0.05	-0.24***	0.24***	-0.57***	-0.29***	0.41***	0.59***	0.37***	0.49***
Max. matur.	0.03	-0.18**	-0.02	-0.02	-0.07	0.13**	-0.04	-0.08	-0.18***	0.24***	-0.57***	-0.34***	0.43***	0.59***	0.40***	0.57***

B. By asset class, aggregating across all terms (continued)

	Securities Financing					Dealer Condition					Other Financial Indicators					
	Funding Demand	"Securities in"(a)	Fails to deliv.	Triparty volume	Triparty haircuts	Excess CDS	Leverage	% Δ Book Equity	%Δ Assets	%Liq. Assets	3-Month Tbill	10 Year Treasury	CDX.IG	CDX.HY	GZ Bond Premium	Chicago FCI
Agency MBS	-0.35***	-0.24***	-0.13*	0.08	-0.08	0.09	-0.03	-0.15*	-0.21***	0.33***	-0.45***	-0.23***	0.36***	0.51***	0.39***	0.47***
IG Corp	0.09	-0.29***	0.14*	0.23***	-	0.04	-0.08	-0.13	-0.26***	0.16**	-0.49***	-0.27***	0.57***	0.67***	0.43***	0.66***
HY Corp	0.47***	-0.18*	-	-0.17**	-0.13	0.25***	-0.03	-0.20**	-0.30***	0.29***	-0.54***	-0.42***	0.57***	0.69***	0.47***	0.58***
ABS	0.64***	-0.24***	-	-0.19**	-0.08	0.14*	0.14	-0.00	-0.21**	0.12	-0.72***	-0.43***	0.51***	0.66***	0.42***	0.62***
CMBS	0.28**	-0.18*	-	-	-	0.28***	-0.04	-0.09	-0.19**	0.26***	-0.66***	-0.42***	0.51***	0.67***	0.41***	0.62***
Priv. RMBS	0.13	-0.05	-	0.05	0.04	0.31***	-0.04	-0.14	-0.23***	0.25***	-0.63***	-0.37**	0.49***	0.67***	0.41***	0.58***
Equities	-0.28***	0.17*	-	-0.22***	0.20**	0.09	-0.16**	-0.16**	-0.35***	0.08	-0.38***	-0.14*	0.30***	0.43***	0.26***	0.43***

Notes: The tables show the correlations of quarterly changes in four types of securities financing terms (financing spreads, haircuts, maximum maturities, and maximum amounts), as measured using SCOOS diffusion indices, with various other data from the SCOOS and other sources. In the top panel, correlations are calculated treating each asset class-quarter as a separate observation. In the bottom panel, correlations are calculated treating each term-quarter as a separate observation. Shaded columns are time-series data matched as closely as possible to the SCOOS reporting dates; all other columns are matched to the SCOOS by both date and asset class. Asterisks indicate statistical significance at the 10%, 5%, and 1% level.
(a) For the purposes of this table, the "Securities in" data from the FR-2004 report, which measures the gross amount of funding provided by primary dealers by asset class, is matched to the SCOOS asset class categories as follows. "Corporate bonds" from the FR-2004 are matched to both the IG and HY corporate bond SCOOS categories; "Asset-backed securities" and "Other" from the FR-2004, which are only reported together after 2013 and only separately reported after 2015, are combined and matched to the consumer ABS, CMBS, and private RMBS categories in the SCOOS. Agency MBS and equities from the FR-2004 are matched to their respective SCOOS categories.

Table 5. Regressions of financing terms on market conditions

A. Dependent variable: Financing Spreads

	By Asset Class (*j*)							Pooled			
	Agency MBS	**IG Corp**	**HY Corp**	**ABS**	**CMBS**	**Priv. RMBS**	**Equities**	**5 asset classes**	**6 asset classes**	**5 asset classes**	**6 asset classes**
Demand $_{j,t}$	-0.01	0.04	0.53***	0.35	0.27	0.32**	-0.05	0.22***	0.24***	0.16***	0.15***
	(0.13)	(0.2)	(0.18)	(0.24)	(0.18)	(0.13)	(0.1)	(0.07)	(0.06)	(0.06)	(0.05)
Liquidity $_{j,t}$	-0.42*	-0.36*	-0.56***	-0.15	-0.50***	-0.50***	--	-0.42***	-0.43***	-0.28***	-0.29***
	(0.22)	(0.17)	(0.14)	(0.14)	(0.16)	(0.16)		(0.06)	(0.06)	(0.06)	(0.05)
Realized vol $_{j,t}$	-1.82	0.98	-0.24	-3.68	-2.30	--	0.12	-0.13	--	-0.16	--
	(2.12)	(1.17)	(1.06)	(3.88)	(2.08)		(0.25)	(0.54)		(0.45)	
%Δ dealer equity $_t$	0.60	-0.17	-1.02	-4.34**	-3.92**	-5.97***	-2.45*	-1.63**	-2.26***	--	--
	(1.63)	(1.52)	(1.62)	(1.75)	(1.82)	(1.87)	(1.29)	(0.70)	(0.66)		
CDX HY $_t$	0.04	0.07	0.01	0.01	-0.06	-0.05	-0.01	0.02	0.01	--	--
	(0.05)	(0.05)	(0.06)	(0.06)	(0.07)	(0.07)	(0.04)	(0.02)	(0.02)		
VIX $_t$	0.01	-0.11	0.11	0.67*	0.68*	0.52	0.30	0.17	0.21	--	--
	(0.31)	(0.32)	(0.30)	(0.34)	(0.36)	(0.39)	(0.31)	(0.14)	(0.13)		
10Y swaption vol $_t$	0.13	0.13	0.00	-0.39	-0.36	-0.64	-0.03	-0.04	-0.11		
	(0.26)	(0.27)	(0.28)	(0.34)	(0.37)	(0.42)	(0.21)	(0.13)	(0.12)		
T bill rate $_t$	-0.03	-0.07	-0.09	-0.29**	-0.30**	-0.28**	-0.25***	-0.15***	-0.17***	--	--
	(0.09)	(0.1)	(0.09)	(0.12)	(0.13)	(0.12)	(0.08)	(0.04)	(0.04)		
Asset Class F.E.	--	--	--	--	--	--	--	Yes	Yes	Yes	Yes
Time F.E.	--	--	--	--	--	--	--	No	No	Yes	Yes
Adj R^2	0.31	0.53	0.73	0.65	0.70	0.69	0.34	0.62	0.64	0.82	0.83
Obs	41	41	36	36	36	36	41	190	226	190	226

Notes: The table shows regression results of indices of changes in financing spreads from the SCOOS on various explanatory variables. The first set of columns show separate regressions for each asset class, while the second set of columns shows various pooled specifications. The "6 asset classes" columns exclude data on private RMBS, while the "5 asset classes" columns exclude both private RMBS and equities. Variable construction is described in the text. Constant terms not shown. Standard errors in parentheses. Asterisks indicate statistical significance at the 10%, 5%, and 1% confidence levels.

B. Dependent variable: Haircuts

	By Asset Class (*j*)							Pooled			
	Agency MBS	**IG Corp**	**HY Corp**	**ABS**	**CMBS**	**Priv. RMBS**	**Equities**	**5 asset classes**	**6 asset classes**	**5 asset classes**	**6 asset classes**
Demand *j,t*	-0.25** (0.09)	0.10 (0.1)	0.20 (0.14)	0.29* (0.15)	0.07 (0.15)	0.04 (0.11)	0.00 (0.04)	0.05 (0.05)	0.05 (0.04)	0.04 (0.05)	0.02 (0.05)
Liquidity *j,t*	-0.22 (0.15)	-0.33*** (0.09)	-0.52*** (0.11)	-0.02 (0.09)	-0.42*** (0.13)	-0.32** (0.13)	--	-0.31*** (0.05)	-0.31*** (0.04)	-0.18*** (0.05)	-0.18*** (0.05)
Realized vol *j,t*	-0.14 (1.5)	-0.31 (0.59)	-0.87 (0.86)	2.72 (2.35)	-0.73 (1.77)	--	0.03 (0.09)	-0.20 (0.40)	--	-0.45 (0.41)	--
%Δ dealer equity *t*	0.22 (1.16)	-0.99 (0.77)	0.14 (1.31)	-2.83** (1.06)	-2.48 (1.55)	-4.67*** (1.51)	-0.93* (0.47)	-1.28** (0.52)	-1.79*** (0.49)	--	--
CDX HY *t*	0.03 (0.03)	0.04 (0.02)	0.06 (0.05)	0.02 (0.04)	-0.06 (0.06)	-0.05 (0.06)	0.01 (0.02)	0.02 (0.02)	0.01 (0.02)	--	--
VIX *t*	0.08 (0.22)	-0.12 (0.16)	-0.37 (0.25)	0.27 (0.21)	0.23 (0.31)	0.49 (0.31)	0.06 (0.11)	-0.03 (0.10)	-0.04 (0.10)	--	--
10Y swaption vol *t*	-0.2 (0.18)	-0.06 (0.13)	-0.06 (0.22)	-0.39* (0.21)	-0.31 (0.31)	-0.56 (0.34)	-0.11 (0.08)	-0.17* (0.09)	-0.22** (0.09)	--	--
T bill rate *t*	-0.15** (0.06)	-0.19*** (0.05)	-0.13* (0.07)	-0.35*** (0.07)	-0.37*** (0.11)	-0.43*** (0.1)	-0.05* (0.03)	-0.25*** (0.03)	-0.28*** (0.03)	--	--
Asset Class F.E.	--	--	--	--	--	--	--	Yes	Yes	Yes	Yes
Time F.E.	--	--	--	--	--	--	--	No	No	Yes	Yes
Adj R^2	0.56	0.77	0.74	0.80	0.71	0.72	0.30	0.70	0.71	0.78	0.80
Obs	41	41	36	36	36	36	41	190	226	190	226

Notes: The table shows regression results of indices of changes in haircuts from the SCOOS on various explanatory variables. The first set of columns show separate regressions for each asset class, while the second set of columns shows various pooled specifications. The "6 asset classes" columns exclude data on private RMBS, while the "5 asset classes" columns exclude both private RMBS and equities. Variable construction is described in the text. Constant terms not shown. Standard errors in parentheses. Asterisks indicate statistical significance at the 10%, 5%, and 1% confidence levels.

C. Dependent variable: Maximum amounts

	By Asset Class (*j*)							Pooled			
	Agency MBS	**IG Corp**	**HY Corp**	**ABS**	**CMBS**	**Priv. RMBS**	**Equities**	**5 asset classes**	**6 asset classes**	**5 asset classes**	**6 asset classes**
Demand *j,t*	-0.22** (0.11)	-0.18 (0.12)	0.01 (0.12)	0.12 (0.16)	0.06 (0.14)	0.02 (0.09)	-0.03 (0.09)	-0.05 (0.05)	-0.05 (0.04)	-0.05 (0.05)	-0.07 (0.04)
Liquidity *j,t*	-0.12 (0.18)	-0.33*** (0.1)	-0.19* (0.09)	0.07 (0.09)	-0.18 (0.12)	-0.32*** (0.11)	--	-0.19*** (0.05)	-0.21*** (0.04)	-0.14*** (0.05)	-0.17*** (0.04)
Realized vol *j,t*	-3.07* (1.72)	-0.39 (0.69)	-1.85** (0.69)	-2.36 (2.54)	-4.31** (1.59)	--	0.14 (0.22)	-1.28*** (0.39)	--	-0.78** (0.36)	--
%Δ dealer equity *t*	0.44 (1.33)	1.03 (0.9)	0.53 (1.05)	-0.37 (1.15)	-1.01 (1.40)	0.47 (1.27)	-2.76** (1.15)	0.11 (0.52)	0.16 (0.49)	--	--
CDX HY *t*	0.05 (0.04)	0.07** (0.03)	0.12*** (0.04)	0.07* (0.04)	0.04 (0.06)	0.07 (0.05)	-0.01 (0.04)	0.06*** (0.02)	0.05*** (0.02)	--	--
VIX *t*	-0.11 (0.25)	-0.34* (0.19)	-0.10 (0.20)	0.02 (0.22)	0.19 (0.28)	-0.39 (0.26)	0.09 (0.27)	-0.14 (0.10)	-0.24** (0.10)	--	--
10Y swaption vol *t*	-0.08 (0.21)	-0.17 (0.16)	-0.03 (0.18)	-0.24 (0.22)	-0.18 (0.28)	-0.45 (0.28)	0.06 (0.19)	-0.15 (0.09)	-0.23** (0.09)	--	--
T bill rate *t*	-0.13* (0.07)	-0.11* (0.06)	-0.10* (0.06)	-0.26*** (0.08)	-0.28** (0.1)	-0.15* (0.08)	-0.16** (0.07)	-0.18*** (0.03)	-0.17*** (0.03)	--	--
Asset Class F.E.	--	--	--	--	--	--	--	Yes	Yes	Yes	Yes
Time F.E.	--	--	--	--	--	--	--	No	No	Yes	Yes
Adj R^2	0.41	0.63	0.62	0.66	0.65	0.70	0.22	0.56	0.58	0.75	0.77
Obs	41	41	36	36	36	36	41	190	226	190	226

Notes: The table shows regression results of indices of changes in haircuts from the SCOOS on various explanatory variables. The first set of columns show separate regressions for each asset class, while the second set of columns shows various pooled specifications. The "6 asset classes" columns exclude data on private RMBS, while the "5 asset classes" columns exclude both private RMBS and equities. Variable construction is described in the text. Constant terms not shown. Standard errors in parentheses. Asterisks indicate statistical significance at the 10%, 5%, and 1% confidence levels.

D. Dependent variable: Maximum maturity

	By Asset Class (*j*)							Pooled			
	Agency MBS	**IG Corp**	**HY Corp**	**ABS**	**CMBS**	**Priv. RMBS**	**Equities**	**5 asset classes**	**6 asset classes**	**5 asset classes**	**6 asset classes**
Demand *j,t*	-0.12 (0.09)	-0.11 (0.14)	0.01 (0.12)	0.15 (0.15)	0.00 (0.13)	-0.12 (0.09)	-0.13 (0.09)	-0.05 (0.05)	-0.06 (0.04)	-0.01 (0.05)	0.04 (0.04)
Liquidity *j,t*	-0.28* (0.14)	-0.46*** (0.12)	-0.21** (0.1)	0.04 (0.09)	-0.27** (0.11)	-0.21* (0.11)	--	-0.25*** (0.05)	-0.24*** (0.04)	-0.21*** (0.05)	-0.21*** (0.04)
Realized vol *j,t*	-2.93** (1.41)	0.29 (0.83)	-0.61 (0.73)	-0.69 (2.41)	-2.18 (1.53)	--	0.18 (0.24)	-0.32 (0.39)	--	-0.03 (0.37)	--
%Δ dealer equity *t*	-2.29** (1.09)	1.09 (1.07)	-2.20* (1.12)	-0.76 (1.09)	0.55 (1.34)	-0.43 (1.23)	-1.05 (1.2)	-0.76 (0.51)	-0.72 (0.46)	--	--
CDX HY *t*	-0.05 (0.03)	0.05 (0.03)	0.04 (0.04)	0.05 (0.04)	0.04 (0.05)	0.02 (0.05)	0.00 (0.04)	0.02 (0.02)	0.02 (0.02)	--	--
VIX *t*	0.35 (0.21)	-0.25 (0.23)	-0.02 (0.21)	0.11 (0.21)	-0.26 (0.27)	0.12 (0.25)	0.03 (0.29)	-0.05 (0.10)	-0.04 (0.10)	--	--
10Y swaption vol *t*	-0.12 (0.17)	-0.26 (0.19)	-0.19 (0.19)	-0.17 (0.21)	0.09 (0.27)	-0.4 (0.27)	-0.04 (0.2)	-0.16* (0.09)	-0.20** (0.08)	--	--
T bill rate *t*	-0.20*** (0.06)	-0.12* (0.07)	-0.21*** (0.06)	-0.24*** (0.07)	-0.19* (0.1)	-0.23*** (0.08)	-0.11 (0.07)	-0.20*** (0.03)	-0.20*** (0.03)	--	--
Asset Class F.E.	--	--	--	--	--	--	--	Yes	Yes	Yes	Yes
Time F.E.	--	--	--	--	--	--	--	No	No	Yes	Yes
Adj R^2	0.52	0.65	0.66	0.64	0.63	0.65	0.11	0.60	0.62	0.75	0.78
Obs	41	41	36	36	36	36	41	190	226	190	226

Notes: The table shows regression results of indices of changes in haircuts from the SCOOS on various explanatory variables. The first set of columns show separate regressions for each asset class, while the second set of columns shows various pooled specifications. The "6 asset classes" columns exclude data on private RMBS, while the "5 asset classes" columns exclude both private RMBS and equities. Variable construction is described in the text. Constant terms not shown. Standard errors in parentheses. Asterisks indicate statistical significance at the 10%, 5%, and 1% confidence levels.

Table 6. Standardized regression coefficients in pooled model

	Fin. Spreads	Haircuts	Max. Amounts	Max. Maturity
Demand	**0.18**	0.05	-0.06	-0.05
Liquidity	**-0.50**	**-0.45**	**-0.32**	**-0.42**
Real. vol.	-0.01	-0.02	**-0.18**	-0.04
%Δ dealer equity	**-0.15**	**-0.15**	0.01	-0.10
CDX HY	0.09	0.09	**0.32**	0.12
VIX	0.08	-0.02	-0.10	-0.04
10Y Swaption vol	-0.02	-0.09	-0.09	-0.10
T bill rate	**-0.26**	**-0.50**	**-0.44**	**-0.46**
Adj. R^2	0.62	0.70	0.56	0.60

Notes: The table reports standardized coefficients from the regressions in Table 5, using the pooled specification with five asset classes and time-series control variables. Standardized coefficients indicate the number of standard deviations that the dependent variable (the four financing terms indicated) changes in response to a one-standard-deviation change in the independent variable. Coefficients in boldface are those that are statistically significant at the 5% confidence level. Each regression has a sample size of 190 observations and includes asset-class fixed effects.

Table 7. Standardized regression coefficients in pooled model, excluding COVID-19 observations

	Fin. Spreads	Haircuts	Max. Amounts	Max. Maturity
Demand	**0.16**	0.02	**-0.20**	**-0.16**
Liquidity	**-0.53**	**-0.55**	**-0.37**	**-0.46**
Real. Vol.	-0.00	-0.01	**-0.21**	-0.06
%Δ Dealer Equity	**-0.21**	**-0.25**	-0.06	**-0.18**
CDX HY	0.01	-0.02	0.13	-0.01
VIX	0.11	0.01	-0.08	-0.00
Swaption vol	-0.00	-0.10	-0.07	-0.09
T Bill rate	-0.08	**-0.24**	-0.02	**-0.17**
Adj. R^2	0.44	0.43	0.23	0.35

Notes: The table reports standardized coefficients from the regressions using the pooled specification with five asset classes and time-series control variables (the analogue of the results in Table 6), excluding observations from Q2 2020. Standardized coefficients indicate the number of standard deviations that the dependent variable (the four financing terms indicated) changes in response to a one-standard-deviation change in the independent variable. Coefficients in boldface are those that are statistically significant at the 5% confidence level. Each regression has a sample size of 185 observations and includes asset-class fixed effects.

Table 8. SCOOS market-liquidity index vs. other liquidity measures

	IG Corp. Bonds	HY Corp. Bonds	Pooled
Amihud liquidity *j,t*	-0.51***	-1.25***	-0.60***
	(0.13)	(0.44)	(0.12)
5y on/off spread *t*	-5.05***	-5.05***	-5.12***
	(1.42)	(1.52)	(1.09)
Realized vol *j,t*	0.25	-0.06	-0.17
	(1.02)	(1.14)	(0.75)
R^2	0.59	0.61	0.56
Adj. R^2	0.54	0.56	0.54
Obs	41	36	77

Notes: The table shows regressions of the SCOOS-based indices of market liquidity on various other measures, for the corporate-bond asset classes (the only asset classes where we can compute Amihud statistics from TRACE). Constant terms not shown. Standard errors in parentheses. Asterisks indicate statistical significance at the 10%, 5%, and 1% confidence levels.

Table 9. Correlation of the regression time effects with other time series

	Financing Spread Time Dummies		Haircuts Time Dummies		Max Mat Time Dummies		Max Amt. Time Dummies	
	5 asset classes	6 asset classes	5 asset classes	6 asset classes	5 asset classes	6 asset classes	5 asset classes	6 asset classes
SCOOS Liquidity (Avg)	-0.70	-0.69	-0.72	-0.71	-0.56	-0.53	-0.58	-0.51
Demand (Avg)	0.07	0.09	0.23	0.25	0.10	0.15	0.20	0.24
Real. Vol.	0.48	0.45	0.51	0.47	0.27	0.29	0.29	0.19
%Δ dealer equity	-0.16	-0.19	-0.05	-0.08	-0.02	0.01	0.05	0.07
CDX HY	0.61	0.60	-0.69	-0.67	0.55	0.55	0.61	0.56
VIX	0.37	0.34	0.30	0.28	0.19	0.20	0.21	0.13
10Y Swaption vol	0.22	0.20	0.07	0.07	-0.05	-0.07	-0.05	-0.13
T bill rate	-0.45	-0.45	-0.73	-0.73	-0.61	-0.63	-0.66	-0.65

Notes: The table shows the univariate correlations between the coefficients on the time dummies with various other time series in each of the pooled regressions of Table 5 that contain time fixed effecgs. "Avg" indicates data that are averaged across asset classes to construct a single series.

Table 10. Self-reported reasons for changing terms to various counterparties

	Counterparty risk	Market liquidity	Risk willingness	Int. treas chrges	Capital avail	Competition	Market conventions
Hedge funds	0.13	0.20	0.12	0.07	0.12	0.28	0.09
Insurance cos.	0.14	0.18	0.06	0.12	0.16	0.21	0.14
Nonfin. corps.	0.14	0.18	0.14	0.12	0.09	0.23	0.11
Mutual funds, etc.	0.06	0.20	0.10	0.06	0.14	0.35	0.09
REITs	0.19	0.21	0.14	0.04	0.11	0.25	0.06
Sep'ly mangd accts	0.06	0.20	0.08	0.05	0.11	0.38	0.11
Average:	0.12	0.20	0.11	0.08	0.12	0.28	0.10

Notes: The table shows the relative frequencies with which dealers report each reason for tightening or easing terms on securities financing and derivatives transactions either as "very important" or as among the three most-important reasons, for each counterparty type. Each row sums to 1.00.

Table 11. Significance of self-reported reasons for changing funding terms

Financing Spreads

	Ag. MBS	IG Corp	HY Corp	ABS	CMBS	Priv. MBS
CnterPrty	0.02	1.32	-0.64	-0.96	-0.32	-0.96
MktLiq	2.34**	1.09	2.35**	3.33***	2.73**	2.58**
RiskWill	-1.54	-0.76	0.42	1.77*	0.69	1.45
TreasChrges	0.69	-0.49	-0.20	-1.47	-0.11	0.37
Capital	0.44	2.21**	1.62	-0.14	0.39	-0.45
Competition	1.36	0.55	2.57**	0.28	1.22	0.57
MtkConv	0.01	-0.81	-1.28	0.13	-0.22	0.56
R^2	0.63	0.59	0.77	0.72	0.76	0.71
Adj. R^2	0.56	0.50	0.71	0.65	0.70	0.64

Haircuts

	Ag. MBS	IG Corp	HY Corp	ABS	CMBS	Priv. MBS
CnterPrty	4.28***	1.58	-0.28	1.24	0.86	0.09
MktLiq	4.46***	2.33**	3.39***	3.25***	2.63**	3.24***
RiskWill	-0.66	0.11	1.84*	2.33**	1.88*	2.08**
TreasChrges	-2.98***	0.34	-0.46	-1.71*	0.05	-0.44
Capital	-0.42	0.20	0.79	-1.02	-0.28	-0.52
Competition	-1.11	-1.22	0.27	-0.18	0.49	-0.73
MtkConv	-1.15	0.30	1.11	-0.94	-0.78	-0.11
R^2	0.90	0.74	0.86	0.84	0.84	0.81
Adj. R^2	0.88	0.68	0.83	0.80	0.80	0.77

Maximum Amounts

	Ag. MBS	IG Corp	HY Corp	ABS	CMBS	Priv. MBS
CnterPrty	1.40	1.03	-1.14	2.37**	0.40	-0.61
MktLiq	0.46	2.21**	3.12***	2.46**	3.20***	3.43***
RiskWill	0.73	-1.79*	2.51**	1.11	0.76	0.55
TreasChrges	0.72	0.09	0.18	-1.70	1.15	2.35**
Capital	-0.39	0.26	-1.84*	-1.73*	-2.50**	-1.90*
Competition	0.89	-0.06	0.30	-1.06	0.13	0.13
MtkConv	1.52	2.23**	2.70**	1.13	1.48	1.23
R^2	0.67	0.70	0.80	0.80	0.81	0.82
Adj. R^2	0.60	0.64	0.75	0.75	0.76	0.77

Maximum Maturities

	Ag. MBS	IG Corp	HY Corp	ABS	CMBS	Priv. MBS
CnterPrty	0.87	3.21***	-0.70	1.50	1.57	2.07**
MktLiq	1.63	0.13	3.24***	1.80*	1.77*	1.13
RiskWill	0.81	-2.14**	2.40**	2.09**	1.53	2.46**
TreasChrges	-1.40	0.70	-0.32	-2.22**	1.21	1.92*
Capital	0.16	1.18	-0.37	-0.15	-1.56	-2.05*
Competition	0.81	0.84	-1.01	-1.11	0.14	-1.26
MtkConv	-0.23	0.37	1.44	0.07	0.80	-0.36
R^2	0.60	0.71	0.80	0.72	0.83	0.83
Adj. R^2	0.51	0.65	0.76	0.65	0.78	0.79

Obs	41	41	36	36	36	36

Notes: The table reports *t* statistics in regressions of changes in four different securities financing terms, by asset class, on the fraction of dealers listing various reasons as "very important" in their decisions to change terms on leverage provided to clients. Asterisks indicate statistical significance at the 10%, 5%, and 1% level.

Table 12. Effects of terms on market liquidity

	Residual from first stage excluded [1]	Residual from first stage included [2]
Fin. Spreads *j,t*	-0.04	-0.13
	(0.09)	(0.17)
Haircuts *j,t*	-0.14	0.32
	(0.15)	(0.26)
Max. amounts *j,t*	0.19	0.26
	(0.14)	(0.20)
Max. maturity *j,t*	-0.49***	-0.92***
	(0.13)	(0.20)
Control variables	Yes	Yes
Asset class F.E.	Yes	Yes
Adj. R^2	0.65	0.68
Obs.	226	226

Notes: The table shows the results of regressions of the SCOOS liquidity index on "liquidity controlled" securities-financing terms and various control variables. Liquidity-controlled terms are constructed by removing the changes in terms that are due to deteriorations or improvements in market liquidity and functioning, as reported by dealers, using the results reported in Table 11. In column [1] the liquidity-controlled terms are predicted values from the first-stage regressions (equation (4)); in column [2] the liquidity-controlled terms also include the residuals from the first stage (equation (5)). The regressions pool data across asset classes and exclude equities, which have no liquidity index. Constant terms not shown. Standard errors in parentheses. Asterisks indicate statistical significance at the 10%, 5%, and 1% level.

Table 13. Regressions of asset returns on funding terms

	By Asset Class (*j*)					Pooled	
	Agency MBS	**IG Corp**	**HY Corp**	**ABS**	**CMBS**		
	[1]	**[2]**	**[3]**	**[4]**	**[5]**	**[7]**	**[8]**
Fin. spreads $_{j,t}$	-1.0	-1.3	-3.3	-1.1	0.4	-1.9	-3.4**
	(1.7)	(3.4)	(3.6)	(1.0)	(2.3)	(1.2)	(1.6)
Adj R^2	*0.33*	*0.23*	*0.75*	*0.27*	*0.31*	*0.41*	*0.59*
Haircuts $_{j,t}$	0.4	4.6	0.5	0.2	2.9	-0.1	-3.2*
	(2.4)	(6.7)	(4.5)	(1.7)	(2.6)	(1.6)	(1.7)
Adj R^2	*0.29*	*0.24*	*0.74*	*0.23*	*0.34*	*0.40*	*0.48*
Max. Amounts $_{j,t}$	-4.7**	-8.3	-5.1	-0.9	3.5	-3.8**	-3.7*
	(1.9)	(5.5)	(5.5)	(1.5)	(2.9)	(1.6)	(1.9)
Adj R^2	*0.40*	*0.28*	*0.75*	*0.24*	*0.34*	*0.42*	*0.48*
Max. Maturity $_{j,t}$	-5.6**	-0.7	-0.2	-0.1	3.1	-1.2	-2.5
	(2.3)	(4.8)	(5.2)	(1.6)	(3.1)	(1.6)	(1.9)
Adj R^2	*0.40*	*0.22*	*0.74*	*0.23*	*0.33*	*0.40*	*0.59*
Asset-class-specific controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time-series controls	Yes	Yes	Yes	Yes	Yes	Yes	No
Asset Class F.E.	--	--	--	--	--	Yes	Yes
Time F.E.	--	--	--	--	--	No	Yes
Obs.	41	41	36	36	36	189	189

Notes: The table shows regressions of quarterly asset returns on security financing terms and control variables (not reported). The first set of columns runs the regression for each asset class separately. The last two columns pool across all asset classes. Standard errors in parentheses. Asterisks indicate statistical significance at the 10%, 5%, and 1% level.

Internet Appendix

Appendix. Alternative specifications of main regressions

Tables A.1 through A.3 report the results of various alternative specifications of the baseline regressions in Table 5 of the main text. Table A.1 drops the last quarter of the sample, Q2 2020, which includes the extreme observations associated with the onset of the COVID-19 crisis. Table A.2 considers alternative measures of dealer condition, in place of the change in equity used in our baseline specification. Table A.3 considers an alternative set of time-series control variables for risk and volatility in these regressions and drops the Treasury bill rate as a control. Finally, Table A.4 reports the results of our asset-return regressions (Table 13 in the paper), when we drop the Q2 2020 observations.

A.1 Regressions of financing terms on market conditions, excluding Q2 2020

A. Dependent variable: financing spreads

	By Asset Class (*j*)							Pooled			
	Agency MBS	**IG Corp**	**HY Corp**	**ABS**	**CMBS**	**Priv. RMBS**	**Equities**	**5 asset classes**	**6 asset classes**	**5 asset classes**	**6 asset classes**
Demand *j,t*	0.09 (0.13)	-0.05 (0.21)	0.55*** (0.19)	0.31 (0.25)	0.26 (0.18)	0.31** (0.14)	-0.03 (0.10)	0.19*** (0.07)	0.22*** (0.06)	0.11* (0.06)	0.11** (0.05)
Liquidity *j,t*	-0.53** (0.21)	-0.30 (0.18)	-0.56*** (0.14)	-0.17 (0.15)	-0.50*** (0.16)	-0.49*** (0.17)	--	-0.41*** (0.07)	-0.41*** (0.06)	-0.22*** (0.06)	-0.23*** (0.06)
Realized vol *j,t*	-3.08 (2.11)	0.95 (1.16)	-0.17 (1.09)	-2.96 (4.08)	-2.16 (2.14)	--	0.10 (0.25)	-0.04 (0.60)	--	0.19 (0.54)	--
%Δ dealer equity *t*	0.27 (1.56)	-0.47 (1.52)	-0.99 (1.65)	-4.46** (1.78)	-4.00** (1.86)	-6.03*** (1.91)	-2.61** (1.28)	-1.81** (0.7)	-2.43*** (0.66)	--	--
CDX HY *t*	-0.01 (0.05)	0.06 (0.05)	0.02 (0.06)	-0.01 (0.07)	-0.07 (0.08)	-0.06 (0.08)	-0.03 (0.04)	0.00 (0.03)	0.00 (0.02)	--	--
VIX *t*	0.10 (0.30)	-0.03 (0.32)	0.09 (0.31)	0.67* (0.34)	0.69* (0.37)	0.53 (0.39)	0.34 (0.31)	0.19 (0.14)	0.24* (0.13)	--	--
10Y swaption vol *t*	0.24 (0.25)	0.18 (0.27)	-0.02 (0.28)	-0.38 (0.34)	-0.35 (0.37)	-0.61 (0.43)	-0.01 (0.21)	0.00 (0.13)	-0.07 (0.12)	--	--
T bill rate *t*	0.14 (0.12)	0.02 (0.12)	-0.12 (0.12)	-0.23 (0.14)	-0.26 (0.16)	-24.42 (15.15)	-15.13 (10.35)	-0.07 (0.06)	-0.09* (0.05)	--	--
Asset Class F.E.	--	--	--	--	--	--	--	Yes	Yes	Yes	Yes
Time F.E.	--	--	--	--	--	--	--	No	No	Yes	Yes
Adj R^2	0.20	0.36	0.61	0.38	0.49	0.51	0.04	0.44	0.46	0.74	0.75
Obs	40	40	35	35	35	35	40	185	220	185	220

Notes: The table shows regression results of indices of changes in financing spreads from the SCOOS on various explanatory variables, excluding observations from the second quarter of 2020. The first set of columns show separate regressions for each asset class, while the second set of columns shows various pooled specifications. The "6 asset classes" columns exclude data on private RMBS, while the "5 asset classes" columns exclude both private RMBS and equities. Variable construction is described in the text. Constant terms not shown. Standard errors in parentheses. Asterisks indicate statistical significance at the 10%, 5%, and 1% confidence levels.

B. Dependent variable: Haircuts

	By Asset Class (*j*)							Pooled			
	Agency MBS	**IG Corp**	**HY Corp**	**ABS**	**CMBS**	**Priv. RMBS**	**Equities**	**5 asset classes**	**6 asset classes**	**5 asset classes**	**6 asset classes**
Demand *j,t*	-0.15 (0.09)	0.07 (0.11)	0.16 (0.15)	0.22 (0.14)	0.03 (0.15)	0.03 (0.11)	0.02 (0.03)	0.01 (0.05)	0.02 (0.05)	-0.01 (0.06)	-0.02 (0.05)
Liquidity *j,t*	-0.31** (0.14)	-0.31*** (0.09)	-0.52*** (0.11)	-0.06 (0.08)	-0.41*** (0.13)	-0.30** (0.13)	--	-0.29*** (0.05)	-0.28*** (0.04)	-0.11* (0.06)	-0.10* (0.05)
Realized vol *j,t*	-1.31 (1.41)	-0.32 (0.60)	-1.01 (0.87)	4.19* (2.25)	-0.30 (1.75)	--	0.02 (0.07)	-0.05 (0.42)	--	-0.05 (0.48)	--
%Δ dealer equity *t*	-0.08 (1.05)	-1.08 (0.78)	0.07 (1.31)	-3.06*** (0.98)	-2.75* (1.52)	-4.76*** (1.54)	-1.09*** (0.38)	-1.51*** (0.50)	-2.01*** (0.48)	--	--
CDX HY *t*	-0.02 (0.04)	0.03 (0.03)	0.05 (0.05)	-0.02 (0.04)	-0.09 (0.06)	-0.06 (0.06)	-0.01 (0.01)	0.00 (0.02)	-0.01 (0.02)	--	--
VIX *t*	0.16 (0.2)	-0.10 (0.17)	-0.35 (0.25)	0.27 (0.19)	0.25 (0.3)	0.49 (0.32)	0.10 (0.09)	0.01 (0.1)	0.08 (0.09)	--	--
10Y swaption vol *t*	-0.10 (0.17)	-0.05 (0.14)	-0.02 (0.23)	-0.38* (0.19)	-0.27 (0.31)	-0.51 (0.35)	-0.09 (0.06)	-0.13 (0.09)	-0.17* (0.09)	--	--
T bill rate *t*	0.01 (0.08)	-0.16** (0.06)	-0.07 (0.09)	-0.24*** (0.08)	-0.27** (0.13)	-38.7*** (12.22)	3.74 (3.06)	-0.15*** (0.04)	-0.19*** (0.04)	--	--
Asset Class F.E.	--	--	--	--	--	--	--	Yes	Yes	Yes	Yes
Time F.E.	--	--	--	--	--	--	--	No	No	Yes	Yes
Adj R^2	0.28	0.57	0.56	0.44	0.40	0.44	0.26	0.43	0.43	0.57	0.61
Obs	40	40	35	35	35	35	40	185	220	185	220

Notes: The table shows regression results of indices of changes in haircuts from the SCOOS on various explanatory variables, excluding observations from the second quarter of 2020. The first set of columns show separate regressions for each asset class, while the second set of columns shows various pooled specifications. The "6 asset classes" columns exclude data on private RMBS, while the "5 asset classes" columns exclude both private RMBS and equities. Variable construction is described in the text. Constant terms not shown. Standard errors in parentheses. Asterisks indicate statistical significance at the 10%, 5%, and 1% confidence levels.

C. Dependent variable: maximum amounts

	By Asset Class (*j*)							Pooled			
	Agency MBS	**IG Corp**	**HY Corp**	**ABS**	**CMBS**	**Priv. RMBS**	**Equities**	**5 asset classes**	**6 asset classes**	**5 asset classes**	**6 asset classes**
Demand *j,t*	-0.09 (0.10)	-0.27** (0.11)	-0.07 (0.11)	-0.01 (0.10)	-0.01 (0.11)	0.00 (0.09)	0.00 (0.09)	-0.12*** (0.04)	-0.10** (0.04)	-0.10** (0.05)	-0.11*** (0.04)
Liquidity *j,t*	-0.26 (0.15)	-0.28*** (0.1)	-0.20** (0.08)	0.00 (0.06)	-0.15 (0.1)	-0.28** (0.11)	--	-0.15*** (0.04)	-0.16*** (0.04)	-0.05 (0.05)	-0.09** (0.04)
Realized vol *j,t*	-4.68*** (1.52)	-0.41 (0.64)	-2.11*** (0.63)	0.56 (1.70)	-3.50** (1.32)	--	0.12 (0.22)	-1.11*** (0.37)	--	0.06 (0.40)	--
%Δ dealer equity *t*	0.02 (1.13)	0.71 (0.84)	0.40 (0.96)	-0.83 (0.74)	-1.52 (1.15)	0.28 (1.25)	-2.97** (1.11)	-0.27 (0.44)	-0.21 (0.42)	--	--
CDX HY *t*	-0.02 (0.04)	0.05 (0.03)	0.10** (0.04)	-0.01 (0.03)	-0.02 (0.05)	0.05 (0.05)	-0.03 (0.04)	0.02 (0.02)	0.02 (0.02)	--	--
VIX *t*	0.01 (0.21)	-0.25 (0.18)	-0.05 (0.18)	0.04 (0.14)	0.21 (0.23)	-0.38 (0.26)	0.14 (0.27)	-0.08 (0.09)	-0.17** (0.08)	--	--
10Y swaption vol *t*	0.06 (0.18)	-0.12 (0.15)	0.04 (0.17)	-0.22 (0.14)	-0.10 (0.23)	-0.35 (0.28)	0.09 (0.18)	-0.07 (0.08)	-0.14* (0.08)	--	--
T bill rate *t*	0.09 (0.09)	-0.01 (0.07)	0.00 (0.07)	-0.04 (0.06)	-0.08 (0.10)	-5.35 (9.89)	-4.73 (8.97)	-0.01 (0.04)	-0.01 (0.03)	--	--
Asset Class F.E.	--	--	--	--	--	--	--	Yes	Yes	Yes	Yes
Time F.E.	--	--	--	--	--	--	--	No	No	Yes	Yes
Adj R^2	0.26	0.53	0.41	-0.15	0.21	0.25	0.10	0.23	0.23	0.50	0.52
Obs	40	40	35	35	35	35	40	185	220	185	220

Notes: The table shows regression results of indices of changes in maximum amounts from the SCOOS on various explanatory variables, excluding observations from the second quarter of 2020. The first set of columns show separate regressions for each asset class, while the second set of columns shows various pooled specifications. The "six asset classes" columns exclude data on private RMBS, while the "five asset classes" columns exclude both private RMBS and equities. Variable construction is described in the text. Constant terms not shown. Standard errors in parentheses. Asterisks indicate statistical significance at the 10%, 5%, and 1% confidence levels.

D. Dependent variable: maximum maturities

	By Asset Class (*j*)							Pooled			
	Agency MBS	**IG Corp**	**HY Corp**	**ABS**	**CMBS**	**Priv. RMBS**	**Equities**	**5 asset classes**	**6 asset classes**	**5 asset classes**	**6 asset classes**
Demand *j,t*	-0.06 (0.09)	-0.20 (0.14)	-0.05 (0.13)	0.09 (0.15)	-0.07 (0.11)	-0.13 (0.08)	-0.09 (0.09)	-0.12** (0.05)	-0.12*** (0.04)	-0.09* (0.05)	-0.10** (0.04)
Liquidity *j,t*	-0.34** (0.14)	-0.40*** (0.12)	-0.21** (0.09)	0.01 (0.09)	-0.25** (0.1)	-0.17 (0.10)	--	-0.22*** (0.04)	-0.20*** (0.04)	-0.15*** (0.05)	-0.15*** (0.04)
Realized vol *j,t*	-3.70** (1.42)	0.27 (0.80)	-0.79 (0.72)	0.55 (2.40)	-1.50 (1.35)	--	0.16 (0.22)	-0.35 (0.41)	--	0.24 (0.43)	--
%Δ dealer equity *t*	-2.49** (1.05)	0.79 (1.05)	-2.29** (1.09)	-0.95 (1.05)	0.13 (1.18)	-0.66 (1.16)	-1.29 (1.14)	-1.01** (0.48)	-0.99** (0.43)	--	--
CDX HY *t*	-0.08** (0.04)	0.03 (0.03)	0.02 (0.04)	0.01 (0.04)	-0.01 (0.05)	0.00 (0.05)	-0.03 (0.04)	0.00 (0.02)	0.00 (0.02)	--	--
VIX *t*	0.40* (0.20)	-0.17 (0.22)	0.02 (0.21)	0.12 (0.20)	-0.23 (0.23)	0.14 (0.24)	0.08 (0.27)	0.00 (0.09)	0.01 (0.08)	--	--
10Y swaption vol *t*	-0.05 (0.17)	-0.21 (0.18)	-0.14 (0.19)	-0.16 (0.20)	0.16 (0.24)	-0.28 (0.26)	0.00 (0.19)	-0.10 (0.09)	-0.14* (0.08)	--	--
T bill rate *t*	-0.10 (0.08)	-0.03 (0.08)	-0.13 (0.08)	-0.15* (0.08)	-0.03 (0.1)	-11.54 (9.25)	2.91 (9.27)	-0.09** (0.04)	-0.10*** (0.03)	--	--
Asset Class F.E.	--	--	--	--	--	--	--	Yes	Yes	Yes	Yes
Time F.E.	--	--	--	--	--	--	--	No	No	Yes	Yes
Adj R^2	0.42	0.49	0.44	-0.05	0.26	0.21	-0.06	0.35	0.35	0.57	0.60
Obs	40	40	35	35	35	35	40	185	220	185	220

Notes: The table shows regression results of indices of changes in maximum maturities from the SCOOS on various explanatory variables, excluding observations from the second quarter of 2020. The first set of columns show separate regressions for each asset class, while the second set of columns shows various pooled specifications. The "6 asset classes" columns exclude data on private RMBS, while the "5 asset classes" columns exclude both private RMBS and equities. Variable construction is described in the text. Constant terms not shown. Standard errors in parentheses. Asterisks indicate statistical significance at the 10%, 5%, and 1% confidence levels.

A.2 Regressions of financing terms on market conditions, using alternative measures of dealer condition

A. Dependent variable: Financing Spreads

	Dealer condition = %Δ Equity (Baseline)				Dealer condition = Leverage ratio				Dealer condition = %Δ Assets				Dealer condition = Excess CDS spread			
	5 asset classes		6 asset classes		5 asset classes		6 asset classes		5 asset classes		6 asset classes		5 asset classes		6 asset classes	
	Full sample	Excl. 2020Q2	Full sample	Excl. 2020Q2	Full sample	Excl. 2020Q2	Full sample	Excl. 2020Q2	Full sample	Excl. 2020Q2	Full sample	Excl. 2020Q2	Full sample	Excl. 2020Q2	Full sample	Excl. 2020Q2
Dealer condition measure *t*	-1.63** (0.70)	-1.81** (0.7)	-2.26*** (0.66)	-2.43*** (0.66)	-0.03 (0.03)	-0.04 (0.03)	-0.03 (0.03)	-0.04 (0.03)	-1.30*** (0.45)	-1.34*** (0.45)	-1.56*** (0.42)	-1.60*** (0.42)	0.02 (0.05)	0.04 (0.06)	0.05 (0.05)	0.07 (0.05)
Demand *j,t*	0.22*** (0.07)	0.19*** (0.07)	0.24*** (0.06)	0.22*** (0.06)	0.23*** (0.07)	0.20*** (0.07)	0.24*** (0.06)	0.22*** (0.06)	0.22*** (0.07)	0.19*** (0.07)	0.23*** (0.06)	0.20*** (0.06)	0.23*** (0.07)	0.19*** (0.07)	0.25*** (0.06)	0.23*** (0.06)
Liquidity *j,t*	-0.42*** (0.06)	-0.41*** (0.07)	-0.43*** (0.06)	-0.41*** (0.06)	-0.47*** (0.06)	-0.46*** (0.06)	- 0.48*** (0.06)	-0.47*** (0.06)	-0.44*** (0.06)	-0.43*** (0.06)	-0.45*** (0.06)	-0.44*** (0.06)	-0.46*** (0.06)	-0.44*** (0.07)	-0.46*** (0.06)	-0.44*** (0.06)
Realized vol *j,t*	-0.13 (0.54)	-0.04 (0.60)	--	--	-0.21 (0.54)	-0.16 (0.61)	--	--	-0.15 (0.53)	-0.07 (0.59)	--	--	-0.22 (0.55)	-0.18 (0.61)	--	--
CDX HY *t*	0.02 (0.02)	0.00 (0.03)	0.01 (0.02)	0.00 (0.02)	0.05** (0.02)	0.04 (0.02)	0.05 (0.02)	0.04 (0.02)	0.04* (0.02)	0.02 (0.02)	0.04* (0.02)	0.02 (0.02)	0.04** (0.02)	0.03 (0.02)	0.04** (0.02)	0.03 (0.02)
VIX *t*	0.17 (0.14)	0.19 (0.14)	0.21 (0.13)	0.24* (0.13)	0.00 (0.12)	0.01 (0.12)	-0.02 (0.12)	-0.01 (0.12)	0.12 (0.13)	0.13 (0.13)	0.12 (0.12)	0.13 (0.12)	0.02 (0.13)	0.05 (0.13)	0.02 (0.12)	0.05 (0.12)
10Y swaption vol *t*	-0.04 (0.13)	0.00 (0.13)	-0.11 (0.12)	-0.07 (0.12)	0.03 (0.12)	0.07 (0.13)	-0.01 (0.12)	0.03 (0.12)	-0.04 (0.12)	-0.00 (0.13)	-0.10 (0.12)	-0.05 (0.12)	0.03 (0.12)	0.06 (0.13)	-0.02 (0.12)	0.02 (0.12)
T bill rate *t*	-0.15*** (0.04)	-0.07 (0.06)	-0.17*** (0.04)	-0.09* (0.05)	-0.08** (0.04)	0.01 (0.05)	-0.07** (0.03)	0.01 (0.05)	-0.09*** (0.03)	-0.01 (0.05)	-0.08*** (0.03)	-0.01 (0.05)	-0.09*** (0.03)	-0.01 (0.05)	-0.09*** (0.03)	-0.01 (0.05)
Asset Class F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time F.E.	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Adj R^2	0.62	0.44	0.64	0.46	0.61	0.42	0.62	0.42	0.63	0.45	0.64	0.46	0.61	0.42	0.62	0.43
Obs	190	185	226	220	190	185	226	220	190	185	220	220	190	185	226	220

Notes: The table shows regression results of indices of changes in financing spreads from the SCOOS on various explanatory variables, pooling across asset classes, both including and excluding observation from Q2 2020. In each set of columns, changes in dealer condition are measured using a different explanatory variable. The "six asset classes" columns exclude data on private RMBS, while the "five asset classes" columns exclude both private RMBS and equities. Variable construction is described in the text. Constant terms not shown. Standard errors in parentheses. Asterisks indicate statistical significance at the 10%, 5%, and 1% confidence levels.

B. *Dependent variable: Haircuts*

	Dealer condition = %Δ Equity (Baseline)				Dealer condition = Leverage ratio				Dealer condition = %Δ Assets				Dealer condition = Excess CDS spread			
	5 asset classes		6 asset classes		5 asset classes		6 asset classes		5 asset classes		6 asset classes		5 asset classes		6 asset classes	
	Full sample	Excl. 2020Q2	Full sample	Excl. 2020Q2	Full sample	Excl. 2020Q2	Full sample	Excl. 2020Q2	Full sample	Excl. 2020Q2	Full sample	Excl. 2020Q2	Full sample	Excl. 2020Q2	Full sample	Excl. 2020Q2
Dealer condition measure t	-1.28** (0.52)	-1.51*** (0.50)	-1.79*** (0.49)	-2.01*** (0.48)	0.10*** (0.02)	0.08*** (0.02)	0.11*** (0.02)	0.09*** (0.02)	0.59* (0.34)	0.55* (0.32)	0.50 (0.33)	0.45 (0.32)	0.07* (0.04)	0.11*** (0.04)	0.09** (0.04)	0.13*** (0.04)
Demand j,t	0.05 (0.05)	0.01 (0.05)	0.05 (0.04)	0.02 (0.05)	0.07 (0.05	0.03 (0.05)	0.08* (0.04)	0.06 (0.05)	0.06 (0.05)	0.03 (0.05)	0.07 (0.05)	0.04 (0.05)	0.05 (0.05)	0.01 (0.05)	0.06 (0.04)	0.02 (0.05)
Liquidity j,t	-0.31*** (0.05)	-0.29*** (0.05)	-0.31*** (0.04)	-0.28*** (0.04)	-0.33*** (0.04)	-0.32*** (0.04)	-0.33*** (0.04)	-0.32*** (0.04)	-0.36*** (0.05)	-0.34*** (0.05)	-0.36*** (0.04)	-0.34*** (0.04)	-0.32*** (0.05)	-0.29*** (0.05)	-0.32*** (0.04)	-0.28*** (0.05)
Realized vol j,t	-0.20 (0.40)	-0.05 (0.42)	--	--	-0.25 (0.38)	-0.11 (0.41)	--	--	-0.28 (0.40)	-0.17 (0.43)	--	--	-0.30 (0.40)	0.23 (0.42)	--	--
CDX HY t	0.02 (0.02)	0.00 (0.02)	0.01 (0.02)	-0.01 (0.02)	0.02 (0.02)	0.01 (0.02)	0.02 (0.02)	0.01 (0.02)	0.04*** (0.02)	0.02 (0.02)	0.04** (0.02)	0.02 (0.02)	0.04** (0.02)	0.01 (0.02)	0.02 (0.02)	0.02 (0.02)
VIX t	-0.03 (0.10)	0.01 (0.1)	-0.04 (0.10)	0.08 (0.09)	-0.12 (0.09)	-0.11 (0.09)	-0.10 (0.08)	-0.09 (0.08)	-0.20** (0.09)	-0.18* (0.09)	-0.17* (0.09)	-0.15* (0.09)	-0.10 (0.10)	-0.06 (0.09)	-0.08 (0.09)	-0.04 (0.09)
10Y swaption vol t	-0.17* (0.09)	-0.13 (0.09)	-0.22** (0.09)	-0.17* (0.09)	-0.09 (0.09)	-0.05 (0.09)	-0.11 (0.09)	-0.06 (0.09)	-0.08 (0.09)	-0.03 (0.09)	-0.11 (0.09)	-0.05 (0.09)	-0.14 (0.09)	-0.09 (0.09)	-0.17* (0.09)	-0.11 (0.09)
T bill rate t	-0.25*** (0.03)	-0.15*** (0.04)	-0.28*** (0.03)	-0.19*** (0.04)	-0.24*** (0.03)	-0.14*** (0.04)	-0.24*** (0.02)	-0.16*** (0.03)	-0.20*** (0.03)	-0.10*** (0.04)	-0.21*** (0.02)	-0.12*** (0.04)	-0.21*** (0.03)	-0.09** (0.04)	-0.21*** (0.02)	-0.11*** (0.04)
Adj R^2	0.70	0.43	0.71	0.43	0.72	0.45	0.72	0.44	0.69	0.41	0.69	0.39	0.69	0.42	0.70	0.42
Obs	190	185	226	220	190	185	226	220	190	185	226	220	190	185	226	220

Notes: The table shows regression results of indices of changes in haircuts from the SCOOS on various explanatory variables, pooling across asset classes, both including and excluding observation from Q2 2020. In each set of columns, changes in dealer condition are measured using a different explanatory variable. The "six asset classes" columns exclude data on private RMBS, while the "five asset classes" columns exclude both private RMBS and equities. Variable construction is described in the text. Constant terms not shown. Standard errors in parentheses. Asterisks indicate statistical significance at the 10%, 5%, and 1% confidence levels.

C. Dependent variable: Maximum amounts

	Dealer condition = %Δ Equity (Baseline)				**Dealer condition = Leverage ratio**			
	5 asset classes		**6 asset classes**		**5 asset classes**		**6 asset classes**	
	Full sample	Excl. 2020Q2	Full sample	Excl. 2020Q2	Full sample	Excl. 2020Q2	Full sample	Excl. 2020Q2
Dealer condition measure t	0.11	-0.27	0.16	-0.21	0.02	-0.01	0.02	0.00
	(0.52)	(0.44)	(0.49)	(0.42)	(0.02)	(0.02)	(0.02)	(0.02)
Demand j,t	-0.05	-0.12***	-0.05	-0.10**	-0.05	-0.12***	-0.05	-0.09**
	(0.05)	(0.04)	(0.04)	(0.04)	(0.05)	(0.04)	(0.04)	(0.04)
Liquidity j,t	-0.19***	-0.15***	-0.21***	-0.16***	-0.18***	-0.16***	-0.20***	-0.17***
	(0.05)	(0.04)	(0.04)	(0.04)	(0.05)	(0.04)	(0.04)	(0.04)
Realized vol j,t	-1.28***	-1.11***	--	--	-1.27***	-1.12***	--	--
	(0.39)	(0.37)			(0.39)	(0.37)		
CDX HY t	0.06***	0.02	0.05***	0.02	0.05***	0.02	0.05***	0.02
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)	(0.02)	(0.01)
VIX t	-0.14	-0.08	-0.24**	-0.17**	-0.12	-0.10	-0.21**	-0.19**
	(0.10)	(0.09)	(0.10)	(0.08)	(0.09)	(0.08)	(0.08)	(0.07)
10Y swaption vol t	-0.15	-0.07	-0.23**	-0.14*	-0.15*	-0.06	-0.23***	-0.13*
	(0.09)	(0.08)	(0.09)	(0.08)	(0.09)	(0.08)	(0.09)	(0.08)
T bill rate t	-0.18***	-0.01	-0.17***	-0.01	-0.19***	0.00	-0.18***	-0.01
	(0.03)	(0.04)	(0.03)	(0.03)	(0.03)	(0.03)	(0.02)	(0.03)
Adj R^2	0.56	0.23	0.58	0.23	0.56	0.23	0.58	0.23
Obs	190	185	226	220	190	185	226	220

	Dealer condition = %Δ Assets				**Dealer condition = Excess CDS spread**			
	5 asset classes		**6 asset classes**		**5 asset classes**		**6 asset classes**	
	Full sample	Excl. 2020Q2	Full sample	Excl. 2020Q2	Full sample	Excl. 2020Q2	Full sample	Excl. 2020Q2
Dealer condition measure t	-0.12	-0.19	0.04	-0.05	-0.10***	-0.05	-0.10***	-0.04
	(0.33)	(0.28)	(0.03)	(0.03)	(0.04)	(0.03)	(0.04)	(0.03)
Demand j,t	-0.06	-0.12***	-0.05	-0.10**	-0.04	-0.11**	-0.05	-0.09**
	(0.05)	(0.04)	(0.04)	(0.04)	(0.05)	(0.04)	(0.04)	(0.04)
Liquidity j,t	-0.18***	-0.15***	-0.20***	-0.17***	-0.22***	-0.17***	-0.24***	-0.18***
	(0.05)	(0.04)	(0.04)	(0.04)	(0.05)	(0.04)	(0.04)	(0.04)
Realized vol j,t	-1.27***	-1.11***	--	--	-1.21***	-1.08***	--	--
	(0.39)	(0.37)			(0.39)	(0.37)		
CDX HY t	0.06***	0.02	0.05***	0.02	0.06***	0.03*	0.05***	0.03*
	(0.02)	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)
VIX t	-0.12	-0.09	-0.22**	-0.18**	-0.20**	-0.13*	-0.27***	-0.22***
	(0.09)	(0.08)	(0.09)	(0.08)	(0.09)	(0.08)	(0.08)	(0.08)
10Y swaption vol t	-0.16*	-0.07	-0.23***	-0.13*	-0.12	-0.05	-0.21**	-0.12
	(0.09)	(0.08)	(0.09)	(0.07)	(0.09)	(0.08)	(0.09)	(0.08)
T bill rate t	-0.18***	-0.01	-0.18	-0.01	-0.18***	-0.00	-0.17***	-0.01
	(0.03)	(0.03)	(0.02)	(0.03)	(0.02)	(0.03)	(0.02)	(0.03)
Adj R^2	0.56	0.24	0.58	0.23	0.58	0.24	0.59	0.24
Obs	190	185	226	220	190	185	226	220

Notes: The table shows regression results of indices of changes in maximum amounts from the SCOOS on various explanatory variables, pooling across asset classes, both including and excluding observation from Q2 2020. In each set of columns, changes in dealer condition are measured using a different explanatory variable. The "six asset classes" columns exclude data on private RMBS, while the "five asset classes" columns exclude both private RMBS and equities. Variable construction is described in the text. Constant terms not shown. Standard errors in parentheses. Asterisks indicate statistical significance at the 10%, 5%, and 1% confidence levels.

D. Dependent variable: Maximum maturity

	Dealer condition = %Δ Equity (Baseline)				Dealer condition = Leverage ratio				Dealer condition = %Δ Assets				Dealer condition = Excess CDS spread			
	5 asset classes		6 asset classes		5 asset classes		6 asset classes		5 asset classes		6 asset classes		5 asset classes		6 asset classes	
	Full sample	Excl. 2020Q2	Full sample	Excl. 2020Q2	Full sample	Excl. 2020Q2	Full sample	Excl. 2020Q2	Full sample	Excl. 2020Q2	Full sample	Excl. 2020Q2	Full sample	Excl. 2020Q2	Full sample	Excl. 2020Q2
Dealer condition measure *t*	-0.76 (0.51)	-1.01** (0.48)	-0.72 (0.46)	-0.99** (0.43)	0.05** (0.02)	0.04* (0.02)	0.06*** (0.02)	0.05** (0.02)	0.16 (0.33)	0.11 (0.31)	0.30 (0.30)	0.22 (0.28)	-0.05 (0.04)	-0.01 (0.04)	-0.04 (0.04)	0.00 (0.03)
Demand *j,t*	-0.05 (0.05)	-0.12** (0.05)	-0.06 (0.04)	-0.12*** (0.04)	-0.04 (0.05)	-0.11** (0.05)	-0.04 (0.04)	-0.10** (0.04)	-0.04 (0.05)	-0.11** (0.05)	-0.05 (0.04)	-0.11** (0.04)	-0.04 (0.05)	-0.11** (0.05)	-0.06 (0.04)	-0.11 (0.04)
Liquidity *j,t*	-0.25*** (0.05)	-0.22*** (0.04)	-0.24*** (0.04)	-0.20*** (0.04)	-0.26*** (0.04)	-0.24*** (0.04)	-0.24*** (0.04)	-0.22*** (0.04)	-0.27*** (0.04)	-0.25*** (0.04)	-0.26*** (0.04)	-0.23*** (0.04)	-0.29*** (0.05)	-0.25*** (0.05)	-0.27*** (0.04)	-0.22*** (0.04)
Realized vol *j,t*	-0.32 (0.39)	-0.35 (0.41)	--	--	-0.34 (0.38)	-0.39 (0.40)	--	--	-0.36 (0.39)	-0.41 (0.41)	--	--	-0.32 (0.39)	-0.40 (0.41)	--	--
CDX HY *t*	0.02 (0.02)	0.00 (0.02)	0.02 (0.02)	0.00 (0.02)	0.02 (0.02)	0.01 (0.02)	0.02 (0.01)	0.0. (0.01)	0.03** (0.02)	0.01 (0.02)	0.04** (0.01)	0.02 (0.01)	0.03** (0.02)	0.01 (0.02)	0.03** (0.01)	0.01 (0.01)
VIX *t*	-0.05 (0.10)	0.00 (0.09)	-0.04 (0.10)	0.01 (0.08)	-0.11 (0.09)	-0.09 (0.08)	-0.09 (0.08)	-0.07 (0.07)	-0.14 (0.09)	-0.11 (0.09)	-0.13 (0.08)	-0.10 (0.08)	-0.16* (0.09)	-0.11 (0.09)	-0.12 (0.08)	-0.09 (0.08)
10Y swaption vol *t*	-0.16* (0.09)	-0.10 (0.09)	-0.20** (0.08)	-0.14* (0.08)	-0.11 (0.09)	-0.05 (0.08)	-0.14* (0.08)	-0.09 (0.09)	-0.12 (0.09)	-0.05 (0.09)	-0.15* (0.08)	-0.08 (0.08)	-0.11 (0.09)	-0.06 (0.09)	-0.15* (0.08)	-0.09 (0.08)
T bill rate *t*	-0.20*** (0.03)	-0.09** (0.04)	-0.20*** (0.03)	-0.10*** (0.03)	-0.19*** (0.03)	-0.08** (0.03)	-0.19 (0.02)	-0.09** (0.03)	-0.17*** (0.02)	-0.06 (0.03)	-0.17*** (0.02)	-0.06* (0.03)	-0.16*** (0.02)	-0.06* (0.04)	-0.17*** (0.02)	-0.06* (0.03)
Adj R^2	0.60	0.35	0.62	0.35	0.61	0.35	0.63	0.35	0.59	0.34	0.61	0.33	0.60	0.34	0.61	0.33
Obs	190	185	226	220	190	185	226	220	190	185	226	220	190	185	226	220

Notes: The table shows regression results of indices of changes in maximum maturities from the SCOOS on various explanatory variables, pooling across asset classes, both including and excluding observation from Q2 2020. In each set of columns, changes in dealer condition are measured using a different explanatory variable. The "six asset classes" columns exclude data on private RMBS, while the "five asset classes" columns exclude both private RMBS and equities. Variable construction is described in the text. Constant terms not shown. Standard errors in parentheses. Asterisks indicate statistical significance at the 10%, 5%, and 1% confidence levels.

A.3 Regressions of financing terms on market conditions, using alternative control variables

A. Dependent variable: financing spreads

	By Asset Class (*j*)							Pooled			
	Agency MBS	**IG Corp**	**HY Corp**	**ABS**	**CMBS**	**Priv. RMBS**	**Equities**	**5 asset classes**	**6 asset classes**	**5 asset classes**	**6 asset classes**
Demand *j,t*	0.02 (0.13)	0.10 (0.17)	0.56*** (0.17)	0.67*** (0.17)	0.40** (0.15)	0.28** (0.13)	-0.12 (0.11)	0.31*** (0.06)	0.31*** (0.05)	0.11* (0.06)	0.11** (0.05)
Liquidity *j,t*	-0.67*** (0.20)	-0.40*** (0.14)	-0.56*** (0.11)	-0.16 (0.13)	-0.54*** (0.11)	-0.55*** (0.12)	--	-0.50*** (0.05)	-0.52*** (0.05)	-0.22*** (0.06)	-0.23*** (0.06)
Realized vol *j,t*	-1.67 (2.09)	1.84 (1.20)	-0.39 (0.88)	1.74 (4.48)	-0.88 (2.56)	--	0.16 (0.28)	0.35 (0.54)	--	0.19 (0.54)	--
%Δ Dealer Assets *t*	1.08 (1.15)	-1.11 (0.96)	-1.19 (0.90)	-2.45** (1.06)	-1.36 (1.27)	-2.67** (1.28)	-1.85* (0.92)	-1.35*** (0.44)	-1.54*** (0.42)	--	--
CDX IG *t*	-0.06 (0.16)	0.25 (0.16)	0.18 (0.16)	0.32* (0.17)	0.13 (0.20)	0.06 (0.21)	-0.01 (0.14)	0.13* (0.07)	0.12* (0.07)	--	--
VIX *t*	0.21 (0.33)	-0.03 (0.33)	0.12 (0.29)	0.52 (0.34)	0.31 (0.39)	0.39 (0.42)	0.51 (0.37)	0.19 (0.15)	0.22 (0.14)	--	--
MOVE *t*	-0.03 (0.15)	-0.15 (0.16)	-0.14(0.13)	-0.33* (0.19)	-0.17 (0.22)	-0.29 (0.19)	-0.16 (0.15)	-0.16** (0.07)	-0.17*** (0.06)	--	--
Asset Class F.E.	--	--	--	--	--	--	--	Yes	Yes	Yes	Yes
Time F.E.	--	--	--	--	--	--	--	No	No	Yes	Yes
Adj R^2	0.30	0.56	0.76	0.67	0.68	0.64	0.17	0.62	0.63	0.74	0.75
Obs	41	41	36	36	36	36	41	190	226	185	220

Notes: The table shows regression results of indices of changes in financing spreads from the SCOOS on various explanatory variables, using an alternative set of regressors to the baseline model reported in the text. The first set of columns show separate regressions for each asset class, while the second set of columns shows various pooled specifications. The "6 asset classes" columns exclude data on private RMBS, while the "5 asset classes" columns exclude both private RMBS and equities. Variable construction is described in the text. Constant terms not shown. Standard errors in parentheses. Asterisks indicate statistical significance at the 10%, 5%, and 1% confidence levels.

B. Dependent variable: Haircuts

	By Asset Class (*j*)							Pooled			
	Agency MBS	**IG Corp**	**HY Corp**	**ABS**	**CMBS**	**Priv. RMBS**	**Equities**	**5 asset classes**	**6 asset classes**	**5 asset classes**	**6 asset classes**
Demand *j,t*	-0.19* (0.10)	0.34*** (0.11)	0.43** (0.16)	0.79*** (0.14)	0.51*** (0.14)	0.25* (0.13)	-0.02 (0.04)	0.26*** (0.05)	0.27*** (0.05)	-0.01 (0.06)	-0.02 (0.05)
Liquidity *j,t*	-0.54*** (0.16)	-0.50*** (0.1)	-0.58*** (0.11)	-0.09 (0.10)	-0.53*** (0.1)	-0.57*** (0.12)	--	-0.48*** (0.05)	-0.51*** (0.04)	-0.11* (0.06)	-0.10* (0.05)
Realized vol *j,t*	0.46 (1.63)	0.29 (0.80)	-0.09 (0.83)	5.47 (3.69)	0.39 (2.33)	--	0.05 (0.09)	0.49 (0.48)	--	-0.05 (0.48)	--
%Δ Dealer Assets *t*	1.89** (0.90)	0.02 (0.64)	0.45 (0.85)	0.16 (0.87)	1.95 (1.15)	0.34 (1.27)	-0.70** (0.31)	0.42 (0.39)	0.43 (0.38)	--	--
CDX IG *t*	-0.01 (0.13)	0.10 (0.10)	0.14 (0.15)	0.29* (0.14)	0.12 (0.18)	-0.03 (0.21)	0.06 (0.05)	0.09 (0.06)	0.08 (0.06)	--	--
VIX *t*	0.22 (0.25)	-0.22 (0.22)	-0.35 (0.27)	0.13 (0.28)	-0.20 (0.35)	0.21 (0.42)	0.10 (0.12)	-0.09 (0.13)	-0.04 (0.13)	--	--
MOVE *t*	-0.22* (0.12)	-0.10 (0.11)	-0.18 (0.12)	-0.24 (0.15)	-0.07 (0.20)	-0.20 (0.19)	-0.09* (0.05)	-0.16*** (0.06)	-0.16*** (0.06)	--	--
Asset Class F.E.	--	--	--	--	--	--	--	Yes	Yes	Yes	Yes
Time F.E.	--	--	--	--	--	--	--	No	No	Yes	Yes
Adj R^2	0.45	0.64	0.70	0.64	0.64	0.53	0.24	0.56	0.57	0.57	0.61
Obs	41	41	36	36	36	36	41	190	226	185	220

Notes: The table shows regression results of indices of changes in haircuts from the SCOOS on various explanatory variables, . The first set of columns show separate regressions for each asset class, while the second set of columns. The first set of columns show separate regressions for each asset class, while the second set of columns shows various pooled specifications. The "6 asset classes" columns exclude data on private RMBS, while the "5 asset classes" columns exclude both private RMBS and equities. Variable construction is described in the text. Constant terms not shown. Standard errors in parentheses. Asterisks indicate statistical significance at the 10%, 5%, and 1% confidence levels.

C. Dependent variable: maximum amounts

	By Asset Class (*j*)							Pooled			
	Agency MBS	**IG Corp**	**HY Corp**	**ABS**	**CMBS**	**Priv. RMBS**	**Equities**	**5 asset classes**	**6 asset classes**	**5 asset classes**	**6 asset classes**
Demand *j,t*	-0.17 (0.12)	0.00 (0.12)	0.22 (0.13)	0.64*** (0.14)	0.46*** (0.13)	0.22** (0.10)	-0.10 (0.08)	0.14*** (0.05)	0.14*** (0.04)	-0.10** (0.05)	-0.11*** (0.04)
Liquidity *j,t*	-0.26 (0.19)	-0.38*** (0.1)	-0.25** (0.09)	0.04 (0.10)	-0.36*** (0.09)	-0.48*** (0.09)	--	-0.30*** (0.05)	-0.34*** (0.04)	-0.05 (0.05)	-0.09** (0.04)
Realized vol *j,t*	-2.80 (1.92)	0.47 (0.85)	-0.87 (0.71)	2.08 (3.67)	-3.47 (2.13)	--	0.20 (0.20)	-0.47 (0.47)	--	0.06 (0.40)	--
%Δ Dealer Assets *t*	0.26 (1.06)	-0.80 (0.68)	-0.01 (0.73)	-0.19 (0.87)	1.61 (1.06)	1.62* (0.94)	-2.96*** (0.68)	-0.22 (0.38)	0.13 (0.06)	--	--
CDX IG *t*	0.14 (0.15)	0.11 (0.11)	0.28** (0.13)	0.27* (0.14)	0.18 (0.17)	0.14 (0.15)	-0.08 (0.11)	0.14** (0.06)	0.13** (0.06)	--	--
VIX *t*	0.02 (0.30)	-0.09 (0.23)	-0.06 (0.23)	0.20 (0.28)	-0.01 (0.32)	-0.35 (0.31)	0.21 (0.27)	0.01 (0.13)	-0.06 (0.12)	--	--
MOVE *t*	-0.15 (0.14)	-0.21* (0.11)	-0.22* (0.11)	-0.30* (0.15)	-0.07 (0.18)	-0.25* (0.14)	0.01 (0.11)	-0.22*** (0.06)	-0.24*** (0.05)	--	--
Asset Class F.E.	--	--	--	--	--	--	--	Yes	Yes	Yes	Yes
Time F.E.	--	--	--	--	--	--	--	No	No	Yes	Yes
Adj R^2	0.24	0.50	0.48	0.50	0.54	0.60	0.34	0.39	0.44	0.50	0.52
Obs	41	41	36	36	36	36	41	190	226	185	220

Notes: The table shows regression results of indices of changes in maximum amounts from the SCOOS on various explanatory variables, . The first set of columns show separate regressions for each asset class, while the second set of columns. The first set of columns show separate regressions for each asset class, while the second set of columns shows various pooled specifications. The "six asset classes" columns exclude data on private RMBS, while the "five asset classes" columns exclude both private RMBS and equities. Variable construction is described in the text. Constant terms not shown. Standard errors in parentheses. Asterisks indicate statistical significance at the 10%, 5%, and 1% confidence levels.

D. Dependent variable: maximum maturities

	By Asset Class (*j*)							Pooled			
	Agency MBS	**IG Corp**	**HY Corp**	**ABS**	**CMBS**	**Priv. RMBS**	**Equities**	**5 asset classes**	**6 asset classes**	**5 asset classes**	**6 asset classes**
Demand *j,t*	-0.10 (0.10)	0.08 (0.14)	0.23 (0.15)	0.58*** (0.13)	0.34*** (0.12)	0.11 (0.1)	-0.15* (0.09)	0.13** (0.05)	0.12*** (0.04)	-0.09* (0.05)	-0.10** (0.04)
Liquidity *j,t*	-0.46*** (0.15)	-0.52*** (0.12)	-0.36*** (0.10)	0.00 (0.1)	-0.42*** (0.09)	-0.43*** (0.09)	--	-0.38*** (0.04)	-0.39*** (0.04)	-0.15*** (0.05)	-0.15*** (0.04)
Realized vol *j,t*	-2.00 (1.57)	1.13 (1.01)	0.07 (0.81)	2.03 (3.46)	-1.17 (1.95)	--	0.23 (0.23)	0.29 (0.45)	--	0.24 (0.43)	--
%Δ Dealer Assets *t*	0.08 (0.86)	0.54 (0.81)	-0.13 (0.82)	-0.26 (0.82)	1.77* (0.96)	1.41 (0.95)	-1.41* (0.76)	0.05 (0.37)	0.27 (0.34)	--	--
CDX IG *t*	-0.04 (0.12)	0.13 (0.13)	0.09 (0.14)	0.20 (0.13)	0.11 (0.15)	-0.02 (0.15)	-0.03 (0.12)	0.07 (0.06)	0.06 (0.06)	--	--
VIX *t*	0.22 (0.24)	-0.17 (0.28)	-0.15 (0.26)	0.19 (0.26)	-0.28 (0.29)	0.16 (0.31)	0.13 (0.30)	-0.04 (0.12)	0.00 (0.11)	--	--
MOVE *t*	-0.13 (0.11)	-0.20 (0.14)	-0.15 (0.12)	-0.17 (0.14)	-0.06 (0.17)	-0.19 (0.14)	-0.06 (0.12)	-0.15*** (0.06)	-0.15*** (0.05)	--	--
Asset Class F.E.	--	--	--	--	--	--	--	Yes	Yes	Yes	Yes
Time F.E.	--	--	--	--	--	--	--	No	No	Yes	Yes
Adj R^2	0.39	0.54	0.49	0.46	0.57	0.50	0.13	0.47	0.48	0.57	0.60
Obs	41	41	36	36	36	36	41	190	226	185	220

Notes: The table shows regression results of indices of changes in maximum maturities from the SCOOS on various explanatory variables, . The first set of columns show separate regressions for each asset class, while the second set of columns. The first set of columns show separate regressions for each asset class, while the second set of columns shows various pooled specifications. The "6 asset classes" columns exclude data on private RMBS, while the "5 asset classes" columns exclude both private RMBS and equities. Variable construction is described in the text. Constant terms not shown. Standard errors in parentheses. Asterisks indicate statistical significance at the 10%, 5%, and 1% confidence levels.

Table A.4. Regressions of asset returns on funding terms, excluding Q2 2020

	By Asset Class (*j*)					Pooled	
	Agency MBS	IG Corp	HY Corp	ABS	CMBS		
	[1]	[2]	[3]	[4]	[5]	[7]	[8]
Fin. Spreads j,t	-0.2	0.7	-3.5	-0.9	0.6	-1.4	-3.4**
	(1.8)	(3.1)	(3.6)	(1.0)	(2.4)	(1.1)	(1.6)
Adj R^2	*0.28*	*0.35*	*0.67*	*0.28*	*0.31*	*0.38*	*0.55*
Haircuts j,t	2.4	7.2	0.8	1.7	3.7	1.1	-3.2*
	(2.6)	(5.9)	(4.6)	(2.0)	(2.8)	(1.6)	(1.8)
Adj R^2	*0.30*	*0.38*	*0.66*	*0.28*	*0.36*	*0.38*	*0.55*
Max. Amounts j,t	-4.4*	-2.4	-5.3	0.6	7.3**	-2.8	-4.9**
	(2.3)	(5.6)	(6.3)	(2.3)	(3.5)	(1.8)	(2.1)
Adj R^2	*0.36*	*0.35*	*0.67*	*0.26*	*0.41*	*0.38*	*0.56*
Max. Maturity j,t	-5.0*	3.7	0.4	0.6	5.7	0.5	-2.4
	(2.5)	(4.5)	(5.6)	(1.7)	(3.5)	(1.7)	(2.0)
Adj R^2	*0.37*	*0.36*	*0.66*	*0.26*	*0.38*	*0.38*	*0.54*
Asset-class-specific controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time-series controls	Yes	Yes	Yes	Yes	Yes	Yes	No
Asset Class F.E.	--	--	--	--	--	Yes	Yes
Time F.E.	--	--	--	--	--	No	Yes
Obs.	40	40	35	35	35	184	184

Notes: The table shows regressions of quarterly asset returns on security financing terms and control variables (not reported), excluding the observations from Q2 2020. The first set of columns runs the regression for each asset class separately. The last two columns pool across all asset classes. Standard errors in parentheses. Asterisks indicate statistical significance at the 10%, 5%, and 1% level.