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Senior Credit Officer Opinion Survey on Dealer Financing Terms

December 2015

The December 2015 Senior Credit Officer Opinion Survey on Dealer Financing Terms

Summary

The December 2015 Senior Credit Officer Opinion Survey on Dealer Financing Terms collected qualitative information on changes over the previous three months in credit terms and conditions in securities financing and over-the-counter (OTC) derivatives markets. In addition to the core set of questions, the survey included a set of special questions on high-frequency trading (HFT) firms and their interactions with dealers.[1] The 21 institutions participating in the survey account for almost all dealer financing of dollar-denominated securities to nondealers and are the most active intermediaries in OTC derivatives markets. The survey was conducted during the period between November 17, 2015, and November 30, 2015. The core questions asked about changes between September 2015 and November 2015.[2]

Responses to the questions in the December survey offered a few insights regarding recent developments in dealer-intermediated markets:

- Similar to the September survey, one-third of respondents reported an increase in resources and attention devoted to the management of concentrated credit exposure to central counterparties and other financial utilities over the past three months.
- Dealers indicated that the use of financial leverage by all classes of counterparties was little changed over the past three months.
- A net fraction of one-fourth of the respondents indicated that the price terms offered to hedge funds for securities financing and OTC derivatives transactions have tightened somewhat over the past three months. One-fifth of dealers also noted a tightening of price terms offered to nonfinancial corporations.

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[1] For the purposes of this survey, the term “HFT firms” refers to trading firms that deploy strategies predicated on low latency.

[2] For questions that ask about credit terms, reported net percentages equal the percentage of institutions that reported tightening terms (“tightened considerably” or “tightened somewhat”) minus the percentage of institutions that reported easing terms (“eased considerably” or “eased somewhat”). For questions that ask about demand, reported net fractions equal the percentage of institutions that reported increased demand (“increased considerably” or “increased somewhat”) minus the percentage of institutions that reported decreased demand (“decreased considerably” or “decreased somewhat”).

- For securities financing transactions in high-yield corporate bonds, one-fifth of dealers indicated that effective financing rates (collateral spreads over the relevant benchmark) have increased, and one-fourth of respondents noted that haircuts have increased over the past three months.
- Continuing a trend seen in recent surveys, one-fourth of dealers noted an increase in demand for funding non-agency residential mortgage-backed securities (RMBS).
- In responses to the special questions on HFT firms, about two-thirds of dealers indicated that they have HFT clients in various financial markets.
- Of those respondents that have HFT clients, four-fifths reported that they extend *intraday* credit to such clients in U.S. cash equity markets, and nearly two-thirds responded that they do so in the U.S. cash Treasury market, spot and futures foreign exchange markets, and U.S. equity futures markets.[3] Between two-fifths and three-fifths of respondents reported that they also provide *overnight* credit to HFT customers in cash and futures markets (Treasury, equity, and foreign exchange markets).
- Three-fourths of dealers with HFT clients in U.S. cash equity markets reported that the use of *intraday* credit by these clients had remained basically unchanged over the past three years, while one-fourth reported an increase. About four-fifths of respondents extending *intraday* credit to HFT clients in the U.S. cash equity markets indicated that they had increased the amount of resources and attention devoted to monitoring intraday exposures to such clients over the past three years.
- Among the dealers that participate in the dealer-to-customer market for Treasury securities, more than two-fifths, on net, pointed to a tightening in price terms (such as widening bid-asked spreads) and nonprice terms (such as smaller quote sizes) over the past five years as a result of the increased presence of HFTs in the interdealer market for Treasury securities.[4] In addition, a net fraction of more than two-fifths of dealers indicated that their ability to manage positions in the dealer-to-customer market has diminished as a result of the increased presence of HFTs in the interdealer market.

[3] Survey respondents were instructed that, if during the day HFT clients are allowed to accumulate long or short positions that are larger than the amount of collateral in their accounts, and if the respondent is liable for settling the trades, this should be considered as extending intraday credit even if clients tend to end the day with little or no position.

[4] For the purposes of this survey, "dealer-to-customer market for Treasury securities" refers to the over-the-counter cash Treasury market, where clients are generally not dealers nor HFTs. "Interdealer cash Treasury market" refers to interdealer platforms such as BrokerTec or eSpeed.

Counterparty Types

(Questions 1–40)

Dealers and Other Financial Intermediaries

Similar to the past several surveys, most respondents to the December survey reported that the amount of resources and attention devoted to the management of concentrated credit exposure to dealers and other financial intermediaries remained basically unchanged over the past three months, while the remainder pointed to an increase (see the exhibit "Management of Concentrated Credit Exposures and Indicators of Supply of Credit").

Central Counterparties and Other Financial Utilities

As in the September survey, one-third of respondents indicated that they had increased the amount of resources and attention devoted to the management of concentrated credit exposures to central counterparties and other financial utilities over the past three months. One-fourth of dealers noted that changes in the practices of central counterparties, including changes in margin requirements and haircuts, had influenced to some extent the credit terms applied to clients on bilateral transactions that are not cleared.

Hedge Funds

In the December survey, one-fourth of dealers, on net, indicated that the price terms (such as financing rates) offered to hedge funds for securities financing and OTC derivatives transactions have tightened somewhat over the past three months. The most-cited reason was the diminished availability of balance sheet or capital, followed by higher internal treasury charges for funding. Most respondents reported no change in nonprice terms such as haircuts, maximum maturity, covenants, cure periods, cross-default provisions, and other documentation features. One-fourth of dealers responded that negotiation intensity by hedge fund clients has increased. Smaller net fractions reported increases in the use of leverage by hedge fund clients and in the provision of differential terms to most-favored hedge fund clients (see the exhibit "Use of Financial Leverage"). Most respondents reported that the availability of additional (and not utilized) financial leverage under agreements currently in place with hedge funds was little changed over the past three months.

Trading Real Estate Investment Trusts

Most respondents to the December survey indicated that the price and nonprice terms offered to trading real estate investment trusts have remained basically unchanged. The provision of differential terms to most-favored clients and the intensity of efforts by clients to negotiate more-favorable terms were also reported to be little changed by most respondents, as was the use of financial leverage.

Mutual Funds, Exchange-Traded Funds, Pension Plans, and Endowments

About one-seventh of respondents indicated that price terms offered to mutual funds, exchange-traded funds, pension plans, and endowments had tightened over the past three months, citing diminished balance sheets and higher internal treasury charges for funding as reasons behind this tightening. For these types of clients, nonprice terms, provision of differential terms to most-favored clients, intensity of efforts by clients to negotiate more-favorable terms, and use of financial leverage were all reported by most respondents to be little changed over the past three months.

Insurance Companies

Respondents to the December survey indicated that both price and nonprice terms offered to insurance companies had changed little over the past three months, as had the use of financial leverage. Provision of differential terms to most-favored clients was also reported to be little changed, as was the intensity of efforts by clients to negotiate more-favorable terms.

Separately Managed Accounts Established with Investment Advisers

Dealers indicated that price and nonprice terms negotiated by investment advisers on behalf of separately managed accounts were basically unchanged over the past three months. Provision of differential terms to most-favored clients and the use of financial leverage by investment advisers were also reported to be unchanged, as was the intensity of efforts by investment advisers to negotiate more-favorable terms.

Nonfinancial Corporations

One-fifth of respondents indicated that price terms offered to nonfinancial corporations had tightened over the past three months, with reduced willingness of dealers to take risk as the most frequently cited reason. Nonprice terms offered to such clients and the intensity of efforts by these clients to negotiate more-favorable terms were reported by most respondents to be little changed.

Mark and Collateral Disputes

As in previous surveys, most respondents in December indicated that the volume, persistence, and duration of mark and collateral disputes with all counterparty types included in the survey were little changed over the past three months.

Over-the-Counter Derivatives

(Questions 41–51)

In the December survey, most respondents reported that nonprice terms (such as acceptable collateral, covenants, and the recognition of portfolio or diversification benefits) incorporated in new or renegotiated OTC derivatives master agreements were basically unchanged over the past three months.[5] For all contract types surveyed, initial margins for average and most-favored clients were also reportedly little changed.[6]

Dealers reported little change in the use of nonstandard collateral—that is, collateral other than cash and U.S. Treasury securities—to fulfill margin requirements. On net, respondents generally reported that the volume, persistence, and duration of mark and collateral disputes had remained unchanged for all contract types.

Securities Financing

(Questions 52–79)[7]

One-fifth of the respondents in the December survey indicated that effective financing rates (collateral spreads over the relevant benchmark) for high-yield corporate bonds have increased somewhat for both average and preferred clients over the past three months. One-fourth of dealers responded that haircuts for financing high-yield corporate bonds have increased for average clients, and smaller fractions of respondents reported a tightening in the maximum amount of funding and maximum maturity for both average and preferred clients. In addition, one-fifth of respondents indicated a tightening in the maximum amount of funding for high-grade corporate bonds and non-agency RMBS for average clients. For other collateral types, most respondents reported that the credit terms were little changed, on balance, over the past three months.

More than one-fourth of dealers pointed to an increase in demand for funding of non-agency RMBS over the past three months (see the exhibit “Measures of Demand for Funding and Market Functioning”), and one-fifth of respondents reported an increase in demand for term funding—that is, funding with a maturity greater than 30 days. In addition, one-fifth of respondents indicated an increase in funding demand for high-yield corporate bonds, and smaller fractions indicated that demand for funding agency RMBS, commercial mortgage-backed securities (CMBS), and consumer asset-backed securities (ABS) has increased. For other collateral types covered by the survey, respondents indicated that demand for funding has remained basically unchanged on net.

One-fifth of respondents indicated that the liquidity and functioning of markets have improved for high-grade corporate bonds over the past three months.[8] About one-

[5] The survey asked specifically about requirements, timelines, and thresholds for posting additional margin, acceptable collateral, recognition of portfolio or diversification benefits, triggers and covenants, and other documentation features, including cure periods and cross-default provisions.

[6] Contract types included in the survey are OTC foreign exchange derivatives, interest rate derivatives, equity derivatives, credit derivatives, securitized product derivatives, commodity derivatives, and total return swap referencing nonsecurities (such as bank loans).

[7] Question 80, not discussed here, was optional and allowed respondents to provide additional comments.

[8] Note that survey respondents were instructed to report changes in liquidity and functioning in the market for the underlying collateral to be funded through repurchase agreements and similar secured

fifth of dealers indicated a deterioration in the liquidity and functioning of CMBS markets, while smaller net fractions of respondents reported deteriorations for high-yield corporate bond, agency RMBS, and consumer ABS markets.

Similar to previous surveys, all respondents indicated that the volume, duration, and persistence of mark and collateral disputes were basically unchanged for all of the collateral types.

Special Questions on High-Frequency Trading Firms

Market commentaries have pointed to the increased participation of high-frequency trading (HFT) firms in a number of financial markets. A set of special questions in the December survey asked about markets in which dealers extend intraday and overnight credit to their HFT clients. In addition, dealers were queried about changes over the past three years in the use of *intraday* credit by HFT clients in U.S. cash equity markets as well as changes in terms extended to such clients over the same period. Dealers were also queried about practices employed to monitor and manage intraday exposure to such clients. Finally, survey respondents were asked how increased HFT participation in the interdealer market for cash Treasury securities has affected dealer behavior in the dealer-to-customer market over the past five years.

Credit extended to high-frequency trading clients in a number of financial markets

About two-thirds of respondents indicated that they have HFT clients. However, dealers did not apply a consistent definition of HFT clients when answering the survey. The exact definition applied seems to differ according to the dealer's business model and the visibility they have into the activity of such clients. More specifically, some respondents narrowly defined HFT firms to be proprietary accounts that use low-latency technology and generate high trading volumes during the day but generally tend to close the trading day with little or no exposure. Other dealers defined HFT firms to be clients who utilize low-latency technology, including those that may employ a significant amount of leverage in intraday trading and that may carry sizable positions overnight. Yet others defined HFT firms much more broadly to include all algorithmic traders, even if such traders do not necessarily use low-latency technology. The range of definitions suggests that there are significant differences in dealers' interactions with what are described as HFT clients, including in the terms of services they provide to such clients and the resulting risk exposures.

Of those respondents that have HFT clients, four-fifths reported that they extend *intraday* credit to such clients in U.S. cash equity markets, and nearly two-thirds responded that they do so in the U.S. cash Treasury market, spot and futures foreign

financing transactions, not changes in the funding market itself. This question was not asked with respect to equity markets in the core questions.

exchange markets, and U.S. equity futures markets. About two-fifths of firms indicated that they extend *intraday* credit to HFT clients in the U.S. Treasury futures market.

Between two-fifths and three-fifths of respondents reported that they also provide *overnight* credit to HFT customers in cash and futures markets (Treasury, equity and foreign exchange markets). Responses to this question were importantly driven by the definition of HFT firms adopted. Broadly speaking, dealers that had a narrower definition of HFT firms were more likely to report that they did not provide overnight credit, consistent with the notion that these firms tend to end the day flat in terms of exposures. Any overnight positions reported were said to be de minimis when compared with intraday positions. Some respondents also included settlement-related exposures in their definition of overnight credit, especially with respect to futures contracts. By contrast, respondents that adopted a broader definition of HFT clients indicated that such clients may carry sizable positions overnight (especially in cash markets). In these cases, respondents reported that they may provide overnight credit in the form of securities financing (often through prime brokerage relationships).

Intraday credit extended to high-frequency trading clients in U.S. cash equity markets

Three-fifths of respondents indicated that they have HFT clients in U.S. cash equity markets. Among these respondents, three-fourths noted that the use of *intraday* credit by HFT clients had remained basically unchanged over the past three years, while one-fourth reported an increase. Regarding changes in credit terms on intraday credit provided to HFT clients over the past three years, respondents generally noted that neither price terms (such as financing rates) nor nonprice terms (such as margin or exposure limits) had changed.

About four-fifths of respondents extending *intraday* credit to HFT clients in the U.S. cash equity markets indicated that they had increased the amount of resources and attention devoted to monitoring intraday exposures to such clients over the past three years. With respect to practices typically employed to monitor and manage intraday exposure to HFT clients, all but one dealer reported that they impose a maximum exposure limit or other types of limits for each such client. Two-thirds indicated that they calculate their exposure to HFT clients throughout the day, and one-third noted that they collect intraday margins.

Changing landscape of U.S. cash Treasury market

Finally, dealers were asked whether they participate in the dealer-to-customer market for cash Treasury securities and how their behavior in that market has changed during the past five years as a result of increased HFT participation in the interdealer Treasury market.

More than two-thirds of dealers reported that they participate in the dealer-to-customer market for Treasury securities. Of these respondents, a net fraction of about two-fifths indicated that their ability to manage positions that arise from trades established in the dealer-to-customer market has deteriorated as a result of the increased presence of HFT firms in the interdealer Treasury market. The most-cited reasons for the deterioration were more frequent spikes in volatility and decreased limit order book depth in the interdealer market.[9] Some dealers also pointed to "phantom" liquidity in the interdealer market —that is, observed liquidity that tends to vanish very quickly when an investor tries to trade against it—as a reason for the deterioration in their ability to manage positions.[10]

The increased presence of HFT firms in the interdealer Treasury market has resulted in a tightening in terms quoted by dealers to their clients in the dealer-to-customer markets. In particular, more than two-fifths of respondents, on net, pointed to a tightening in price terms (such as widening bid-asked spreads) and nonprice terms (such as smaller quote sizes) over the past five years.

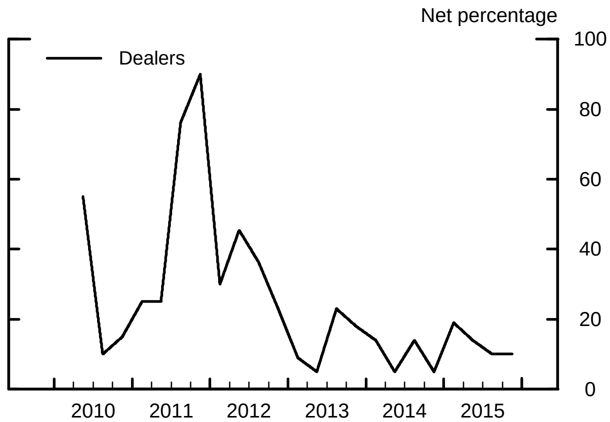
This document was prepared by Yesol Huh, Division of Research and Statistics, Board of Governors of the Federal Reserve System. Assistance in developing and administering the survey was provided by staff members in the Statistics Function and the Markets Group at the Federal Reserve Bank of New York.

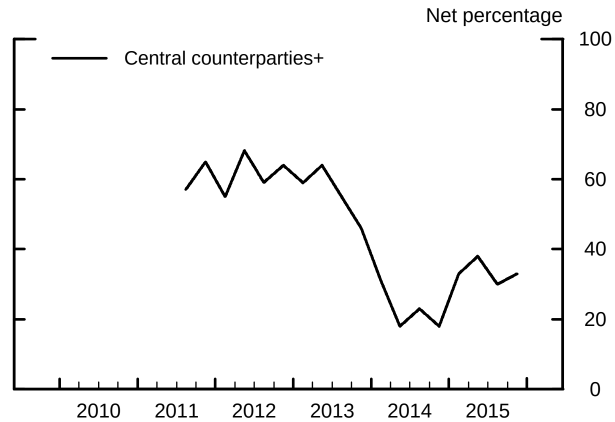
[9] Other options provided to the respondents were higher transaction costs in the interdealer market, higher operational risk in the interdealer market, and higher average levels of volatility in the interdealer market.

[10] Respondents were given the option to respond in text. Three respondents mentioned phantom liquidity in the text response.

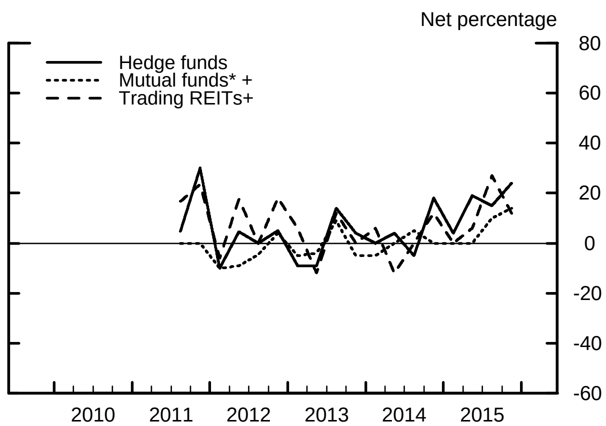
Management of Concentrated Credit Exposures and Indicators of Supply of Credit

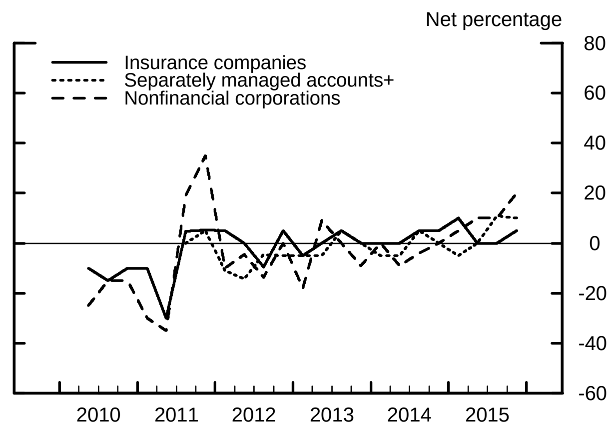
Respondents increasing resources and attention to management of concentrated exposures to:



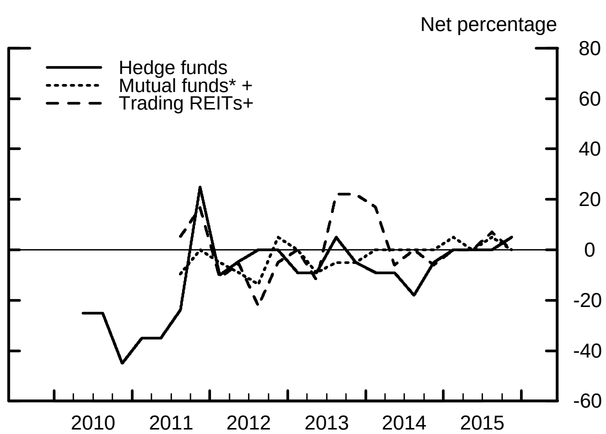


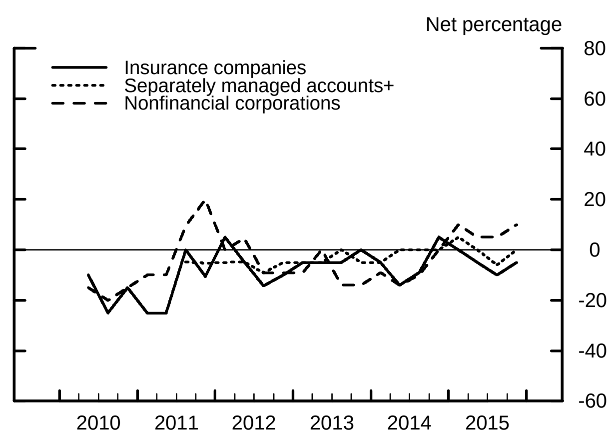
Respondents tightening price terms to:





Respondents tightening nonprice terms to:

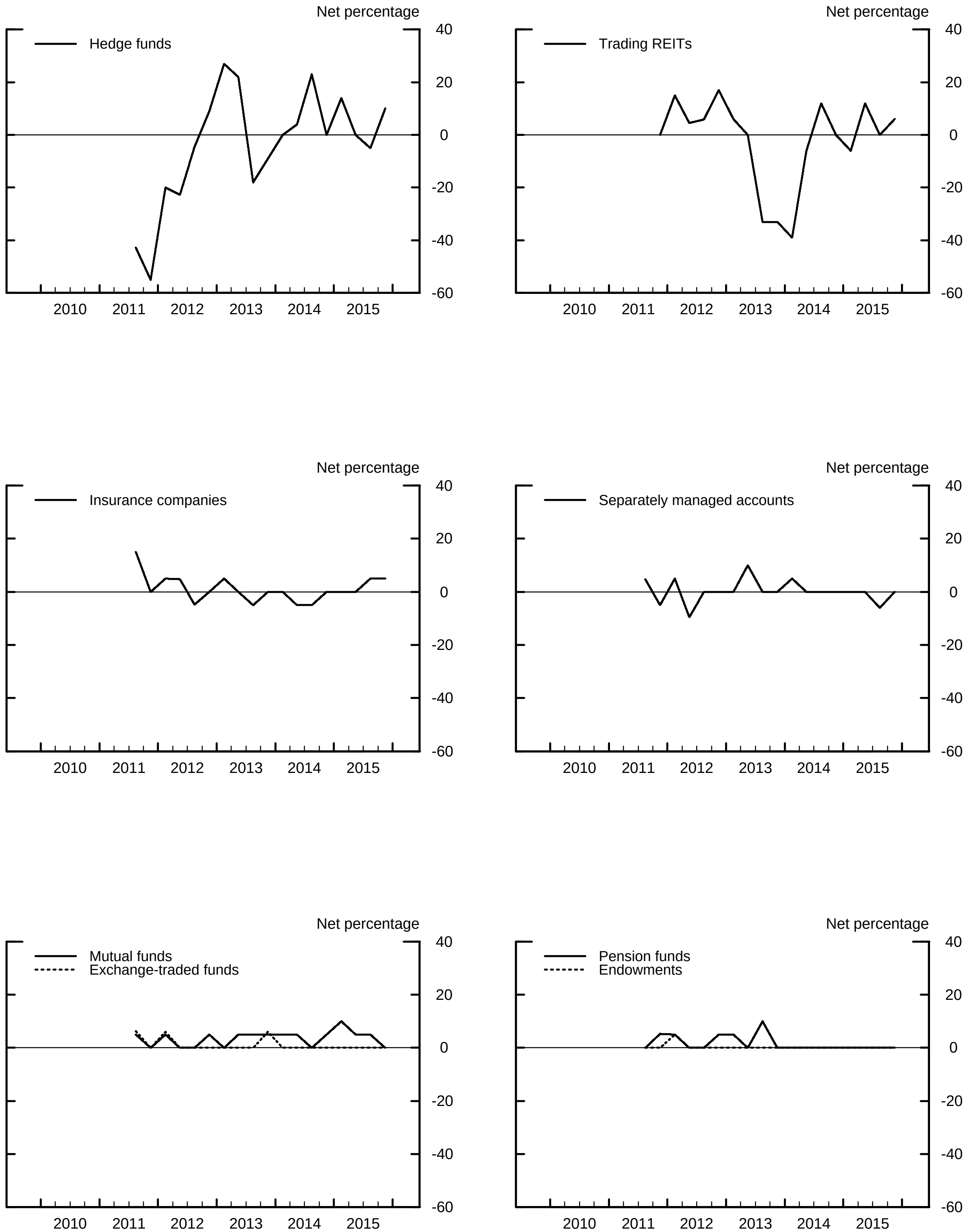




+ This question was added in the September 2011 survey.
* Includes mutual funds, exchange-traded funds, pension plans, and endowments.

Use of Financial Leverage

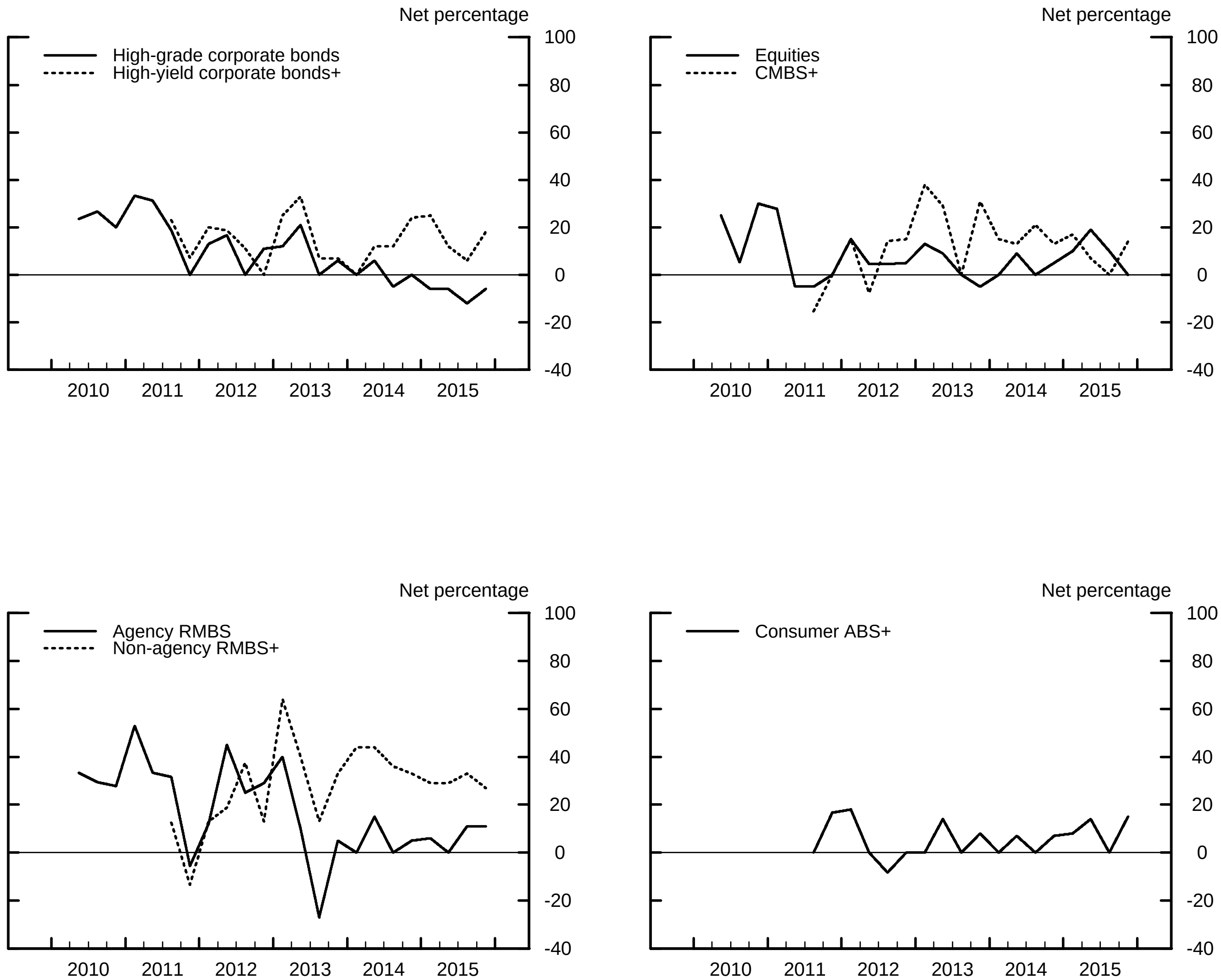
Respondents reporting increased use of leverage by:



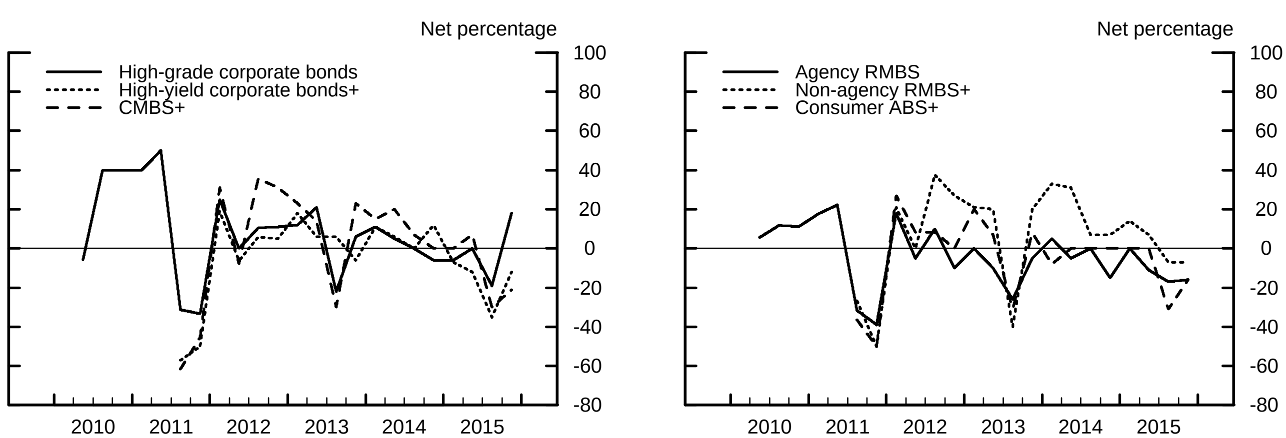
Note: All questions regarding counterparties’ use of financial leverage were added in the September 2011 survey.

Measures of Demand for Funding and Market Functioning

Respondents reporting increased demand for funding of:



Respondents reporting an improvement in liquidity and functioning in the underlying markets for:



+ This question was added in the September 2011 survey.