

# Current Issues

IN ECONOMICS AND FINANCE

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## What Financing Data Reveal about Dealer Leverage

*Tobias Adrian and Michael J. Fleming*

*The Federal Reserve collects data on the financing activities of the primary government securities dealers. Some market analysts argue that the data show a considerable rise in dealer leverage in recent years. However, a close reading of the data suggests that dealer borrowing involving fixed-income securities has grown only modestly. Moreover, the increase that has occurred is not clearly associated with greater risk taking.*

The Federal Reserve collects market data from the dealers with which it has a trading relationship—the so-called primary dealers. The data cover transactions, positions, financing, and settlement activities in U.S. Treasury securities, agency debt securities, mortgage-backed securities (MBS), and corporate debt securities. The data are consolidated and released publicly by the Fed and used by market analysts to monitor market conditions and the activities of primary dealers.

Some market analysts claim that the financing data show a substantial rise in dealer leverage in recent years. A common argument is that low short-term interest rates have spurred a large number of carry trades—transactions in which market participants borrow money on a short-term basis and invest in higher yielding long-term assets. Such trades increase investors' exposure to interest rate changes. A consequent concern is that rises in interest rates could lead to large trading losses, a rapid deleveraging, and high volatility.<sup>1</sup>

This edition of *Current Issues* examines what the primary dealer financing data can tell us about dealer leverage. We begin by reviewing why and how dealers

engage in financing activities. We then discuss which financing data are reported to the Fed, which data the Fed releases, and what the data mean. From these data, we calculate and evaluate two measures of dealer leverage and discuss the relationship between our preferred leverage measure—net financing—and dealer risk taking. Lastly, we analyze the relationship between net financing, interest rates, and interest rate volatility.

Our analysis of the financing data indicates that dealer borrowing involving fixed-income securities has grown only modestly in recent years. Moreover, because the rise is not associated with increased net positions, there is little evidence to suggest greater risk taking. Nonetheless, we do find some evidence to support the idea that dealer leverage is related to interest rates and volatility. In particular, financing tends to decline both before and after increases in interest rates and volatility.

### How and Why Financing Occurs

Financing activities provide the funds and securities needed by market participants when they trade securities. Primary dealers buy and sell fixed-income securities for several reasons: to make markets for their customers, to

take speculative positions, and to hedge positions in derivatives and other fixed-income securities.

A dealer taking a long position by buying a security must pay the seller. If the dealer does not pay out of available funds, it has to finance the position by borrowing. Dealers typically do this by providing securities they already own as collateral for the loan. For example, a dealer financing the purchase of a Treasury security could borrow funds from a corporate treasurer while providing another fixed-income security as collateral.

Conversely, a dealer taking a short position by selling a security it does not own must deliver the security to the buyer. A short position is financed by borrowing the security while providing cash or other securities as collateral. For instance, a dealer selling short a Treasury note could borrow the note from a mutual fund and provide cash as collateral.

Several types of transactions are used to finance long and short positions, but all are essentially equivalent to the collateralized borrowings described above. In a *repurchase agreement (repo)*, for example, an investor sells a security while agreeing to buy it back at a higher price on a future date. From the perspective of the funds lender—which buys a security while agreeing to resell it—such agreements are called *reverse repos*.

In a *securities lending transaction*, an investor lends a security while accepting another security or cash as collateral. If cash is offered as collateral, then the securities lender pays the borrower a cash collateral fee. When another security is offered as collateral, the securities borrower pays the lender a fee for the benefit of borrowing a specific security.

### What Is Reported and by Whom

Market data are reported to the Federal Reserve Bank of New York by the primary government securities dealers. The dealers represent an important but limited subset of the fixed-income market. Moreover, dealer reporting entities may not include all trading activities of the larger organizations of which they are a part. Furthermore, additions to and withdrawals from the list of primary dealers as well as internal reorganizations change the dealer population over time.<sup>2</sup>

Dealers report (via form FR 2004) their transactions, positions, financing, and settlement activities in U.S. Treasury securities, agency debt securities, MBS, and corporate debt securities.<sup>3</sup> Reporting occurs weekly, as of the close of business each Wednesday, for broad categories of securities.<sup>4</sup> Data are submitted by 4:00 p.m. the following business day, usually Thursday, through the Federal Reserve's Internet Electronic Submission System.

The Fed publicly releases summary data each Thursday at 4:15 p.m., one week after the data are collected.<sup>5</sup> The data are

aggregated across all dealers and are available only for broad categories of securities; individual issue data and individual dealer data are not made public. Table 1 shows the financing data reported for May 19, 2004, from the release of May 27.

### Dealer Financing Data

Dealer financing is reported on a gross basis, distinguishing between “securities in” and “securities out” for each asset class. Securities in refer to securities received by a dealer in a financing arrangement, whereas securities out refer to securities delivered by a dealer. For instance, if a dealer enters into a repo, in which it borrows funds and provides securities as collateral, it would report securities out. If a dealer enters into a security-for-security transaction, it would report both securities in and securities out.

In addition, repos and reverse repos are reported across all asset classes combined. These memo items are subsets of the broader securities-in and securities-out figures, and reveal the share of dealer financing conducted through these particular transactions. On May 19, 2004, outstanding repos totaled \$2,743 billion, accounting for 89 percent of the \$3,076 billion in securities out across all asset classes (calculated from Table 1). In contrast, reverse repos of \$2,022 billion represented only 69 percent of the \$2,929 billion in securities in.

The financing data are also broken down by the length of the financing arrangement. Overnight and continuing (or open) agreements refer to financing activities that are either for one business day or that can be terminated on demand by either party, but otherwise continue indefinitely. Term agreements refer to financing activities that have an original specified length of more than one business day.

Table 1  
**Financing by Primary Dealers**  
Amount Outstanding as of May 19, 2004 (Billions of Dollars)

Type of Financing	Overnight and Continuing	Term	Total
<b>Securities in</b>			
U.S. Treasury securities	948.4	1,082.5	2,031.0
Agency debt securities	192.6	210.5	403.1
Mortgage-backed securities	56.4	292.2	348.6
Corporate debt securities	99.8	46.7	146.5
<b>Securities out</b>			
U.S. Treasury securities	822.7	982.5	1,805.2
Agency debt securities	319.7	145.7	465.4
Mortgage-backed securities	384.2	198.9	583.1
Corporate debt securities	184.7	37.4	222.2
<b>Memo:</b>			
Reverse repurchase agreements	646.1	1,375.4	2,021.5
Repurchase agreements	1,452.3	1,290.8	2,743.1

Source: Federal Reserve Bank of New York.

The financing figures reported are the actual funds paid or received. In the case of a repo, for example, a dealer reports the funds received on the settlement of the repo, and not the value of the pledged securities. When only securities are exchanged, the dealer reports the market value of the pledged securities.

### Periodic Changes in the Dealer Reports

The Fed considers changes to the dealer reports every three years to improve market monitoring while limiting the reporting burden. The last major set of changes commenced with the reports for the week ending July 4, 2001. Asset classes covered by the reports were expanded to include corporate debt securities. Moreover, the financing data became more detailed by providing information by asset class.

In other ways, the financing data became less detailed in July 2001. Until then, dealers reported financing by the type of transaction employed, and not just total financing and repo financing. The earlier data are instructive, as they reveal that securities borrowing transactions account for the overwhelming majority of securities-in transactions that are not reverse repos. Thus, when dealers borrow funds, they rely largely on repos, but when they borrow securities, they rely on both reverse repos and securities borrowing transactions. Most of the securities borrowed are against cash rather than against other securities.<sup>6</sup>

### Interpreting Dealer Financing Data

#### Net Repo Financing

Some market observers contend that the financing data show a marked rise in dealer leverage in recent years. This interpretation is typically based on an analysis limited to the repo data. In particular, net repo financing—the net amount of funds primary dealers borrow through fixed-income security repos—is calculated as repos minus reverse repos. The measure has indeed increased strongly in recent years (Chart 1), and was \$722 billion on May 19, 2004 (calculated from Table 1).

However, net repo financing is an incomplete and potentially misleading measure of dealer leverage. First and foremost, it does not account for transactions that are essentially equivalent to repos but not reported as such. In particular, securities lending transactions perform the same economic function as repos but are not reported as repos in the financing data. Another drawback is that the asset classes covered by the measure have changed over time, most recently being expanded to include corporate debt securities in July 2001.

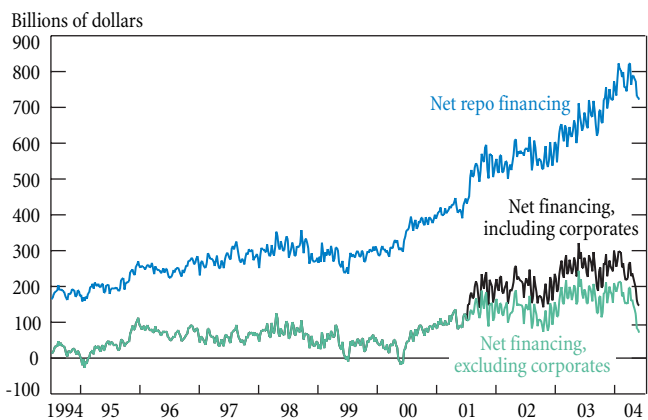
#### Net Financing

A measure of dealer leverage that addresses some of the drawbacks of the net repo financing measure is net financing. Net financing, calculated as securities out minus securities in, gauges the net amount of funds primary dealers borrow through all fixed-income security financing transactions. The measure thus encompasses all financing transactions reported by the dealers. Moreover, because securities in and securities out are reported by asset class, net financing can be computed to exclude corporates so as to generate a time series consistent with respect to the covered asset classes.<sup>7</sup>

On May 19, 2004, overall net financing was \$147 billion (Table 1, combined securities out minus combined securities in), considerably less than net repo financing. In addition, net financing has consistently been far less than net repo financing for at least the past decade (Chart 1). Much of the increase in net repo financing in recent years can thus be explained by the measure's exclusion of transactions that are essentially equivalent to repos. Moreover, an examination of net financing including and excluding corporates shows that some of the increase in net repo financing since July 2001 is likely explained by the inclusion of corporates since that time.

Although net financing is consistently far below net repo financing, it is apparent that net financing did indeed increase in recent years. In particular, net financing rose from mid-2000 to mid-2003, a period in which the federal funds target rate dropped from 6.50 percent to 1.00 percent. Net financing then fell sharply in spring 2004 amid growing expectations of a near-term increase in the funds rate.

Chart 1  
Net Financing and Net Repo Financing of Primary Dealers



Source: Federal Reserve Bank of New York.

Notes: The chart plots net financing (“securities out” minus “securities in”) and net repo financing (repos minus reverse repos) by week from July 6, 1994, to May 19, 2004. The financing involves U.S. Treasury securities, agency debt securities, and mortgage-backed securities for the whole sample and, except where noted, corporate debt securities since July 4, 2001.

### *Financing, Leverage, and Risk Taking*

While net financing accurately measures the funds borrowed by primary dealers through fixed-income security financing transactions, it is itself an imperfect gauge of dealer leverage. In particular, it does not take into account the capital of primary dealers. Net financing divided by total assets (net financing plus capital) would be a better leverage measure, but the capital of the primary dealer units is generally not observed.

It is also worth noting that leverage captures only one dimension of risk taking. Leverage is related to risk taking because, for a given set of positions, higher leverage puts more capital at risk. However, just as leverage changes over time, so does the riskiness of positions, often making the net effect on capital at risk ambiguous. For example, a dealer could increase its leverage while decreasing the riskiness of its positions, causing its capital at risk to rise, fall, or remain the same.

Another way in which leverage and risk taking diverge is through speculative positions that do not affect net financing. For example, if a dealer buys a thirty-year bond and sells a three-month bill, the net effect on financing may be zero. An additional way is through forward, futures, and options positions, which for the most part do not require financing. As a result, if a dealer buys and finances, say, a ten-year note and sells a ten-year-note futures contract, its net financing will increase even though the two positions might largely offset one another in terms of risk exposure.

Primary dealer positions data include forward positions and thus provide evidence on dealer risk taking beyond the

financing data.<sup>8</sup> Net positions (in Treasuries, agencies, and mortgage-backed securities) tended to track net financing between mid-1994 and mid-2000, but the measures diverged markedly afterward (Chart 2). In fact, net positions have shown no long-term increase in recent years, suggesting that the upswing in net financing that has occurred is not attributable to an increase in net positions and is thus not clearly associated with greater risk taking. (It is worth noting, however, that the net positions measure is an imperfect indicator of risk taking for many of the reasons that net financing is; the relationship between these two measures is discussed further in the appendix on page 7.)

### *Dealer Financing, Interest Rates, and Interest Rate Volatility*

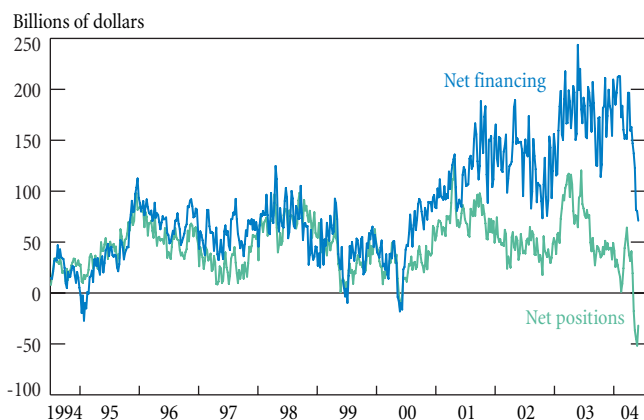
Some market analysts have suggested that low short-term interest rates have spurred a large number of carry trades in recent years, thereby increasing investors' exposure to interest rate changes. A resultant concern is that increases in interest rates could lead to large trading losses, a rapid deleveraging, and high volatility. By comparison, our analysis suggests that dealer borrowing has grown only modestly, and that the increase is not associated with greater position taking. Nonetheless, it is worth examining the extent to which our preferred leverage measure—net financing—is related to interest rates and interest rate volatility.

We analyze the relationship between net financing, interest rates, and interest rate volatility using correlation and regression techniques. The variables we employ, in addition to net financing, are the fed funds target rate (the primary tool of monetary policy), the three-month/fed funds spread (a predictor of future monetary policy), the ten-year/three-month spread (a predictor of the business cycle [Estrella and Mishkin 1996]), Moody's Baa/Aaa spread (an indicator of credit quality), and implied interest rate volatility (a proxy for expected future volatility). Summary statistics for the variables are presented in Table 2.

### *Concurrent Relationships among Dealer Financing, Interest Rates, and Interest Rate Volatility*

Implied interest rate volatility is the only variable significantly correlated with net financing in terms of weekly changes, and the relationship is not especially strong economically or statistically (Table 3). One explanation for the negative relationship is that increased volatility elevates the amount of dealer capital at risk, causing dealers to reduce their net positions because of capital constraints.<sup>9</sup> A second explanation has causality going the other way, with dealer speculation stabilizing security prices.<sup>10</sup> Additional evidence we present later is consistent with both hypotheses.

Chart 2  
Net Financing and Net Positions of Primary Dealers



Source: Federal Reserve Bank of New York.

Note: The chart plots net financing ("securities out" minus "securities in") and net positions involving U.S. Treasury securities, agency debt securities, and mortgage-backed securities by week from July 6, 1994, to May 19, 2004.

Table 2

### Summary Statistics for Net Financing of Primary Dealers and Other Market Variables

Variable	Level		Weekly Change	
	Mean	Standard Deviation	Mean	Standard Deviation
Net financing	84.1	53.0	0.11	19.5
Fed funds target rate	430.8	184.9	-0.63	9.4
Three-month/fed funds spread	-20.7	22.7	-0.01	11.2
Ten-year/three-month spread	148.6	113.5	0.15	14.2
Implied interest rate volatility	106.4	17.0	-0.06	8.6
Moody's Baa/Aaa spread	81.6	23.6	0.00	4.0

Source: Authors' calculations, based on data from Bloomberg L.P. and Federal Reserve Bank of New York.

Notes: Net financing involves U.S. Treasury securities, agency debt securities, and mortgage-backed securities. Treasury yields are used in the three-month/fed funds and ten-year/three-month spread variables. Implied interest rate volatility is the Merrill Lynch MOVE index, a weighted average of implied volatilities of the two-year (20 percent), five-year (20 percent), ten-year (40 percent), and thirty-year (20 percent) Treasury securities. The Baa/Aaa spread is calculated using Moody's corporate bond indexes. All variables are measured as of the Wednesday close. Net financing is in billions of dollars; the other variables are in basis points. The sample period is July 6, 1994, to May 19, 2004 (516 weeks).

Note that our statistical analysis is undertaken in terms of changes, and not levels, because the variables exhibit time trends over the sample period.<sup>11</sup> An analysis in terms of levels would produce results that are quite different, and that might seem strong, but that are in fact spurious and misleading. For example, the fed funds target rate is highly negatively correlated with net financing in terms of levels, but the more appropriate tabulation in terms of changes reveals essentially no correlation.

### Dynamic Relationships among Dealer Financing, Interest Rates, and Interest Rate Volatility

To capture the dynamic relationships among the variables, we regress weekly changes in the variables on lagged weekly changes in the other variables, as well as on their own lagged values. Because the independent variables in the regressions

are lagged, we can interpret the coefficients as predictive, that is, a change today in an independent variable predicts a future change in the dependent variable. The coefficients quantify average effects, based on past data, and do not show that one variable causes another.<sup>12</sup>

We find that increases in the fed funds target rate and in the three-month/fed funds spread precede decreases in net financing (Table 4, row 1). The coefficient of -0.70 for the fed funds rate, for example, implies that a one-time increase in the funds rate of 1 basis point is followed, on average, by a decrease in net financing of \$700 million over thirteen weeks, holding other variables constant. Increases in the fed funds rate, or expectations thereof, may be inducing dealers to reduce their exposure to rising rates, leading to a decline in net financing.

Increases in implied interest rate volatility are also found to precede decreases in net financing. The coefficient of -1.78 for implied interest rate volatility (Table 4, row 1) suggests that a rise in volatility of 1 basis point predicts a decline in net financing of \$1.78 billion. This finding is consistent with the argument that dealers face capital constraints. As volatility increases, so does the riskiness of positions, causing dealers to unwind positions and reduce net financing.

Not only do interest rates and volatility help to explain net financing, but net financing helps to explain interest rates and volatility (Table 4, column 1). An increase in net financing of \$1 billion is expected to be followed by a decrease of 0.34 basis points in the fed funds rate over the next thirteen weeks and a fall of 0.32 basis points in implied interest rate volatility, although neither relationship is especially strong statistically. The interest rate finding is consistent with the argument that dealers reduce net financing in anticipation of an increase in the fed funds rate; the volatility finding supports the hypothesis that dealer positions tend to stabilize asset prices.

Net financing is not significantly related to either the ten-year/three-month spread, which predicts recessions, or the

Table 3

### Correlations of Weekly Changes of Net Financing of Primary Dealers and Other Market Variables

	Net Financing	Fed Funds Target Rate	Three-Month/Fed Funds Spread	Ten-Year/Three-Month Spread	Implied Interest Rate Volatility	Moody's Baa/Aaa Spread
Net financing	1					
Fed funds target rate	0.04	1				
Three-month/fed funds spread	-0.01	-0.50***	1			
Ten-year/three-month spread	-0.00	-0.29***	-0.20***	1		
Implied interest rate volatility	-0.08*	-0.04	0.01	0.16***	1	
Moody's Baa/Aaa spread	-0.01	-0.11**	-0.02	-0.02	0.06	1

Source: Authors' calculations, based on data from Bloomberg L.P. and Federal Reserve Bank of New York.

\*Statistically significant at the 10 percent level. \*\*Statistically significant at the 5 percent level. \*\*\*Statistically significant at the 1 percent level.

Table 4  
**Determinants and Effects of Net Financing**

Dependent Variable	Independent Variable					
	Net Financing	Fed Funds Target Rate	Three-Month/ Fed Funds Spread	Ten-Year/ Three-Month Spread	Implied Interest Rate Volatility	Moody's Baa/Aaa Spread
Net financing	-1.65**	-0.70**	-0.99**	-0.29	-1.78***	0.02
Fed funds target rate	-0.34*	0.99***	1.55***	0.14	-0.35	0.18
Three-month/fed funds spread	0.03	-0.13	-1.14***	0.30*	0.09	-0.25
Ten-year/three-month spread	-0.08	-1.11***	-0.39	-0.35	0.07	0.09
Implied interest rate volatility	-0.32*	-0.53***	-0.48*	-0.36***	-0.60**	-0.84**
Moody's Baa/Aaa spread	0.03	-0.19**	-0.11	-0.13**	0.38***	-0.30*

Source: Authors' calculations, based on data from Bloomberg L.P. and Federal Reserve Bank of New York.

Notes: Each row summarizes the results of a regression of the weekly changes of the dependent variable on thirteen lags of the weekly changes of the independent variables. For each independent variable, we report the sum of coefficients for all thirteen lags. The asterisks refer to the test that the sum is different from zero.

\*Statistically significant at the 10 percent level. \*\*Statistically significant at the 5 percent level. \*\*\*Statistically significant at the 1 percent level.

Baa/Aaa spread, which tends to increase during recessions. It therefore appears to be unrelated to expectations about changes in the business cycle.

### Conclusion

Data reported to the Federal Reserve cover primary dealer financing activities involving U.S. Treasury securities, agency debt securities, mortgage-backed securities, and corporate debt securities. While some market analysts argue that the data show a considerable rise in dealer leverage in recent years, our analysis indicates that dealer borrowing involving fixed-income securities has grown only modestly. Moreover, the increase that has occurred is not associated with increased net positions, so there is little evidence to suggest greater risk taking by primary dealers.

We do, however, find evidence to support the idea that dealer leverage is related to interest rates and volatility. In particular, increases in interest rates and volatility precede decreases in financing while decreases in financing precede increases in interest rates and volatility. We leave it to future research to explore these relationships more fully and to ascertain the reasons behind them.

### Notes

The authors thank Sally Chen, Robert Elsasser, Spence Hilton, Charles Jones, Frank Keane, Jim Mahoney, and Deborah Perelmuter for helpful comments.

1. Press reports on carry trades and the implications of higher interest rates include "Slow Rate Gain Will Mean Less Pain," *Financial Times*, March 11, 2004, "Carry Trade Flirts with Danger if Rates Rise," *Dow Jones International News*, April 7, 2004, and "The Unravelling Mystery," *Financial Times*, May 10, 2004.

2. The current list of primary dealers is available at <[http://www.newyorkfed.org/markets/pridealers\\_current.html](http://www.newyorkfed.org/markets/pridealers_current.html)>.

3. The reporting forms, instructions, and releases are available at <<http://www.newyorkfed.org/markets/primarydealers.html>>.

4. Dealers also report data for certain specific issues. Some of these data are reported daily.

5. The positions and financing data have been released with a one-week lag only since January 15, 2004; previously, there was a four-week lag.

6. This fact is apparent from the financing breakdowns observed in the earlier data: securities in are broken down by reverse repos, securities borrowed, and securities received as pledge, whereas securities out are broken down by repos, securities lent, securities pledged, and collateralized loans. To the extent that other securities are used as collateral in the securities borrowing transactions, they show up under securities pledged. However, securities pledged offset only a small share of securities borrowed (for example, the share was 15 percent on June 27, 2001).

7. Net financing is still not a perfectly comparable measure over time, however, because securities in and securities out are calculated from July 6, 1994, to June 27, 2001, using the subcategories of financing identified in endnote 6. Total securities in and securities out were not reported over that period. Nonetheless, there is no abrupt change in reported financing from the last week under the old reporting procedures to the first week under the new procedures, suggesting that the reporting change does not substantively affect the comparability of net financing over time.

8. Although dealers reported futures and options positions between July 6, 1994, and June 27, 2001, for consistency we exclude them from our analysis.

9. Grossman and Vila (1992) offer an early study of the effect of leverage constraints on trading activity.

10. At least since Friedman (1953), economists have debated whether financial speculation stabilizes or destabilizes asset prices. Adrian (2004) presents a model in which the state of the economy determines whether arbitrageurs stabilize or destabilize prices.

11. The fed funds target rate, the ten-year/three-month spread, and the Baa/Aaa spread have unit roots but are not cointegrated. Net financing and implied interest rate volatility have time trends.

12. Our estimated system of equations can be interpreted as a vector autoregression. In robustness tests, we find that the system is stable.

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## Appendix: The Relationship between Net Financing and Net Positions

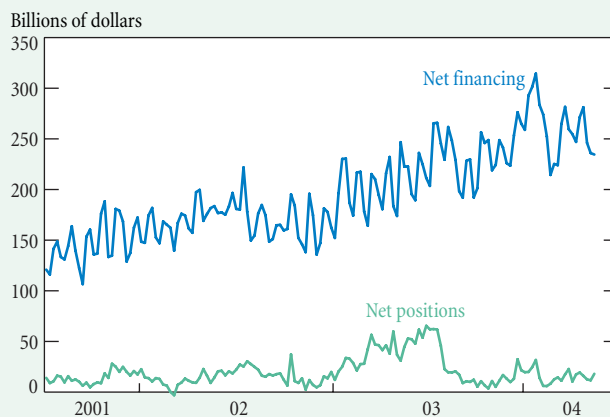
As we explain in the text, dealers undertake financing activities to meet delivery obligations on the positions they take. One might therefore expect to see a close relationship between net financing and net positions. In fact, primary dealers' net financing involving U.S. Treasury securities, agency debt securities, and mortgage-backed securities (MBS) tracked net positions in these securities fairly well between mid-1994 and mid-2000 (Chart 2 in the text). Since mid-2000, however, the two series have diverged, with net financing increasingly exceeding net positions.

Net financing can differ from net positions for several reasons:

- Dealers pay for purchased securities out of available funds and do not finance the purchases. Net positions thus increase without any change in net financing.
- Dealers, in their role as market makers for financing transactions, finance their customers' long positions out of available funds. Dealers thus receive securities, reducing their net financing, without any change in positions. (Dealers could also offset these transactions with other counterparties, in which case net financing would not change.)
- Dealers have positions that have not yet settled because of the time lag between trade execution and settlement. The transfer of securities and cash often occurs the day after a trade. However, securities that have not yet been issued do not settle until issuance day. Moreover, in the MBS market, many trades do not settle for a number of weeks. Such transactions are, in effect, forward contracts. These transactions are reported as positions once they are executed, but financing occurs only when the trades settle. This third factor can either increase or decrease net financing relative to net positions; thus, it is the only one of the three reasons that can explain why net financing exceeds net positions.

The overall relationship between net financing and net positions is further illuminated by examining the relationship across asset classes. Net positions are close to, or exceed, net financing for Treasuries, agencies, and corporates. In contrast, net financing greatly exceeds net positions for MBS, and the gap has widened over time (see chart). MBS issuance increased sharply in the low-interest-rate environment of recent years because of the surge in refinancings and new mortgages. Dealers apparently responded to this development by raising their long positions in MBS that had settled, perhaps because of market-making considerations, while boosting their short positions in MBS that had not settled, perhaps to hedge their long positions. Thus, net financing of mortgage-backed securities has risen, while net positions have not.

### Net Financing and Net Positions of Primary Dealers: Mortgage-Backed Securities



Source: Federal Reserve Bank of New York.

Note: The chart plots net financing ("securities out" minus "securities in") and net positions by week from July 4, 2001, to May 19, 2004.

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