



C A M B R I D G E A S S O C I A T E S L L C

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TAKING THE MEASURE OF CONTINUING CREDIT MARKET STRESSES

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Taking the Measure of Continuing Credit Market Stresses

If there is one message that's been drilled into investors over the past 18 months, it is that credit markets are the source of the equity market's infection, and that until the health of credit markets begins to improve, equity markets will remain on the sick bed. With many of the often-cited market indicators (including credit spreads, issuance of corporate paper, and implied market volatility) showing significant improvement today versus their levels in October and November, we thought it would be beneficial to review the current status of these indicators and the implications for the equity market.

Spreads Narrowing, but Continuing to Highlight Counterparty Concerns

As the credit crunch began to generate widespread attention in August 2007, investors were encouraged to track so-called TED spreads and the Libor-OIS spread as signals of the health of credit markets—both spreads are indicators of the willingness of banks to lend to one another. The TED spread is shown as the yield spread between banks' and the U.S. Treasury's three-month borrowing costs (Table A). This spread hit a high of 456 basis points (bps) in October before narrowing to 94 bps at the end of January. This is a decrease of nearly 4 percentage points in just two months, and yet the current level is higher than the vast majority of periods over the past two decades (the average spread since 1986 is just 55 bps). The Libor-OIS spread, a cousin of the TED spread, reportedly was a favorite of former Federal Reserve Bank Chairman Alan Greenspan. Like the TED spread, the Libor-OIS spread has plummeted from its peak level, but it remains vastly above levels that could be considered normal (Table B).¹ Similar patterns are also evident in other credit spreads, including investment-grade corporate bond yield spreads, which nearly topped their widest of the 1930s before shrinking in December and January, but they remain remarkably wide by historical standards.

What does the recent moderation in spreads portend? The *level* of tightening (in bp terms and in percentage terms) is massive, but that is primarily because it is declining from a highly inflated base. The *direction* of the change is real and is positive, with some caveats. We believe that the narrowing of spreads does reflect somewhat greater appetite for corporate credit (which is also reflected in the issuance picture discussed below). Shrinking spreads also reflect the impact of massive government interventions in capital markets. The Treasury, Federal Deposit Insurance Corporation (FDIC), and the Federal Reserve Bank have implemented a mind-boggling alphabet soup of initiatives over the past 18 months in an attempt to stabilize credit markets. This is evident from Table C, which compares the pre-crisis and current Fed balance sheets, highlighting the immense increase in both size and complexity. Many of these programs were originally scheduled to lapse in April, but in early February they were extended to October 30.

¹ Overnight-indexed swaps (OIS) allow banks and other financial market participants to transform fixed-rate exposure to floating-rate exposure, for an overnight duration. Participants in the OIS market may have less counterparty risk than Libor lenders, because Libor lenders are counting on borrowers for timely payment of interest and principal, whereas OIS participants are dependent on counterparties simply to pay the overnight change in the relationship between fixed and floating rates. For that reason, the Libor-OIS spread may be a purer measure of counterparty risk.

Issuance Climbing Back Up, but How Would it Look Without Government Backstops?

Issuance of corporate bonds and commercial paper has also improved markedly; however, most of the improvement comes as a direct result of government backstops, which will end at some point (we hope).

Investment-grade dollar bond issuance in January topped \$100 billion, the highest January total on record. About 24% of this total (and 43% of the issuance from U.S.-based firms) came in the form of government-guaranteed issuance. The FDIC has established a program that guarantees the payment of principal and interest for bonds issued by June 30, 2009, and maturing by June 30, 2012. Despite the thaw in January, total corporate bond issuance over the past 12 months has plunged nearly \$300 billion over the prior-year period—\$400 billion if FDIC-backed bonds are excluded (Table D).² Understandably, this program has proven quite popular for issuers. As of January 30, financial issues backed by the FDIC were trading at a par-weighted average option-adjusted spread of 106 bps over Treasuries, versus 1,144 bps for issues trading without the backstop.³ Is the program a success? It certainly benefits the banks and finance arms that are able to issue low-interest guaranteed debt, but investors should not assume that new-issue yields will remain low once the FDIC stops guaranteeing new issuance.

Of the many programs on the engorged Fed balance sheet, two that have shown some success so far are the AMLF and the CPFF, shown together in Table C as “Commercial Paper Facilities.” The commercial paper (CP) market began enduring significant stress in late summer 2007 as buyers stopped coming forward for asset-backed commercial paper. After the Lehman Brothers bankruptcy and a large money market mutual fund “broke the buck” (because the fund had to mark down its Lehman paper), the CP market hit a wall. Spreads jumped from about 60 bps over Treasury bills to nearly 250 bps over, essentially overnight (Table E). “Prime” money market mutual funds, terrified by the threat of “rolling blackout” redemptions, were suddenly interested only in Treasury bills, which they could liquidate easily if they had tens of billions of dollars in redemptions (Table F). The Treasury and Fed rightly feared an utter economic meltdown if CP issuers were unable to roll over their debt. In addition to extending a guarantee to money market fund investors in order to avert large redemptions, the Fed also began two programs offering issuers of asset-backed and unsecured CP a buyer of last resort. The two CP facilities buy qualifying issues, at a penalty interest rate compared to the average yield demanded by private market participants for other paper. The assets in the CPFF fell by \$102 billion in late January, most likely because much of the maturing paper was rolled over into the private market (or replaced by longer-term debt such as FDIC-guaranteed paper), rather than back into the CPFF.⁴

² The January corporate bond issuance figures detailed above and the January data included in Table D are from different data providers and may not be directly comparable.

³ Eliminating issues trading at a spread of more than 1,000 bps and issues rated BBB+ or below (to eliminate the most credit-challenged bonds in the index) still results in a par-weighted average spread of 486 bps; more than quadruple the spread of the guaranteed bonds. The indices used for this comparison are the Merrill Lynch U.S. Financial Corporation 1-3 Year and a portion of the Merrill Lynch AAA U.S. Agency Master (FDIC-guaranteed bonds are currently classified by index providers as agency securities).

⁴ However, during the week ended February 4, approximately \$100 billion of CP held by the Fed matured, and all of it was rolled back into the Fed facility. J.P. Morgan speculates that this development may have been the result of issuers’ concerns about potential ratings downgrades that might prevent them from going back to the facility at a later date.

The programs may be becoming obsolete, which is a positive, but this is due in part to the presence of guarantees on issuer's longer-term debt.

Few Are Willing to Borrow, to Lend, or to Add Risk

The banks and finance companies that have been the beneficiaries of so much government largesse (including the programs detailed above, many more programs, asset guarantees, and capital investments) have generally *decreased*, rather than increased, their lending. Lending standards for a broad variety of loan types are perhaps as high as they have been for decades (Table G). The net percentage of banks reporting that they are *continuing* to further tighten standards narrowed moderately in the most recent survey, merely indicating a deceleration in the tightening process, rather than an increased willingness to lend. Banks are not opening the spigots, but neither are potential borrowers lining up to drink. Few are in the market for additional assets or additional leverage to support an existing asset; therefore, aside from homeowners who wish to refinance and companies that *need* to refinance (corporate borrowers or commercial real estate owners with maturities coming due in 2009 or 2010), there is very little borrower demand.⁵

One final indicator is not directly linked to the credit markets, but is widely watched by market participants. Known as the VIX, this index measures the level of future S&P 500 market volatility implied by option prices. High investor demand for options-based protection against price declines causes high levels of implied volatility, and the VIX is negatively correlated with equity returns. Table H links the VIX with a closely related predecessor (the VXO) to establish a longer history of implied volatility. The levels reached in November (80%) dwarfed all other periods, save for a brief blip on Black Monday 1987, when the S&P 500's market value was trimmed by one-fifth in one terrifying day and the level of the VXO spiked from 36% to 150%. The current level of about 45% is about half the peak level, but matches or tops all other historic pre-2008 highs (except for Black Monday). The VIX, like the TED spread, is simultaneously displaying remarkable improvement from the dark days of October and November, yet significant continued dislocation.

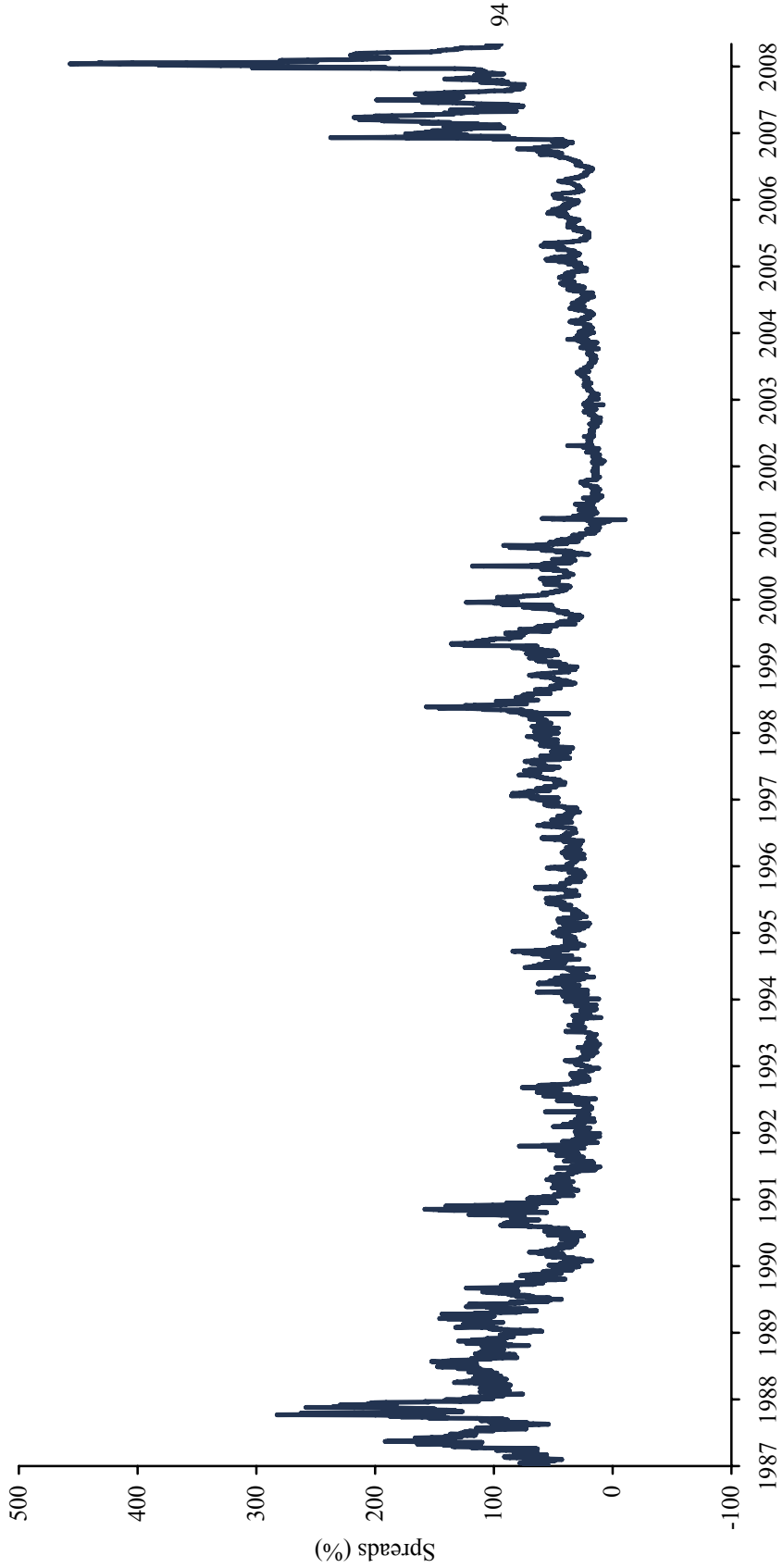
Conclusion

The improvement in widely watched market indicators including credit spreads, corporate credit issuance, and implied volatility has been marked since last fall. Even with the massive improvement during the months of December and January, however, many of these important indicators remain at distressed levels. Some of the spread decline and issuance improvement is due to targeted initiatives from the Treasury, Federal Reserve, and FDIC. It is likely that if those agencies pulled the plug on their initiatives, we would see rapid deterioration (perhaps not to the extremes reached last fall, however). For this reason, several popular programs were recently extended from April 2009 to October 2009.

⁵ This is evident from the same survey series used to compile Table G.

Essentially, the hospital monitor shows that the patient is again breathing, but we must remember that she is attached to a ventilator. Investors appear increasingly interested in adding credit exposure, but appetite for adding equity exposure appears weak. Further improvement in these indicators, particularly *organic* improvement (rather than one directly resulting from government purchases and guarantees), is likely a prerequisite for a sustainable equity recovery.

Table A
TED SPREADS (US\$ LIBOR YIELD MINUS TREASURY BILL YIELD)
December 31, 1986 – January 31, 2009



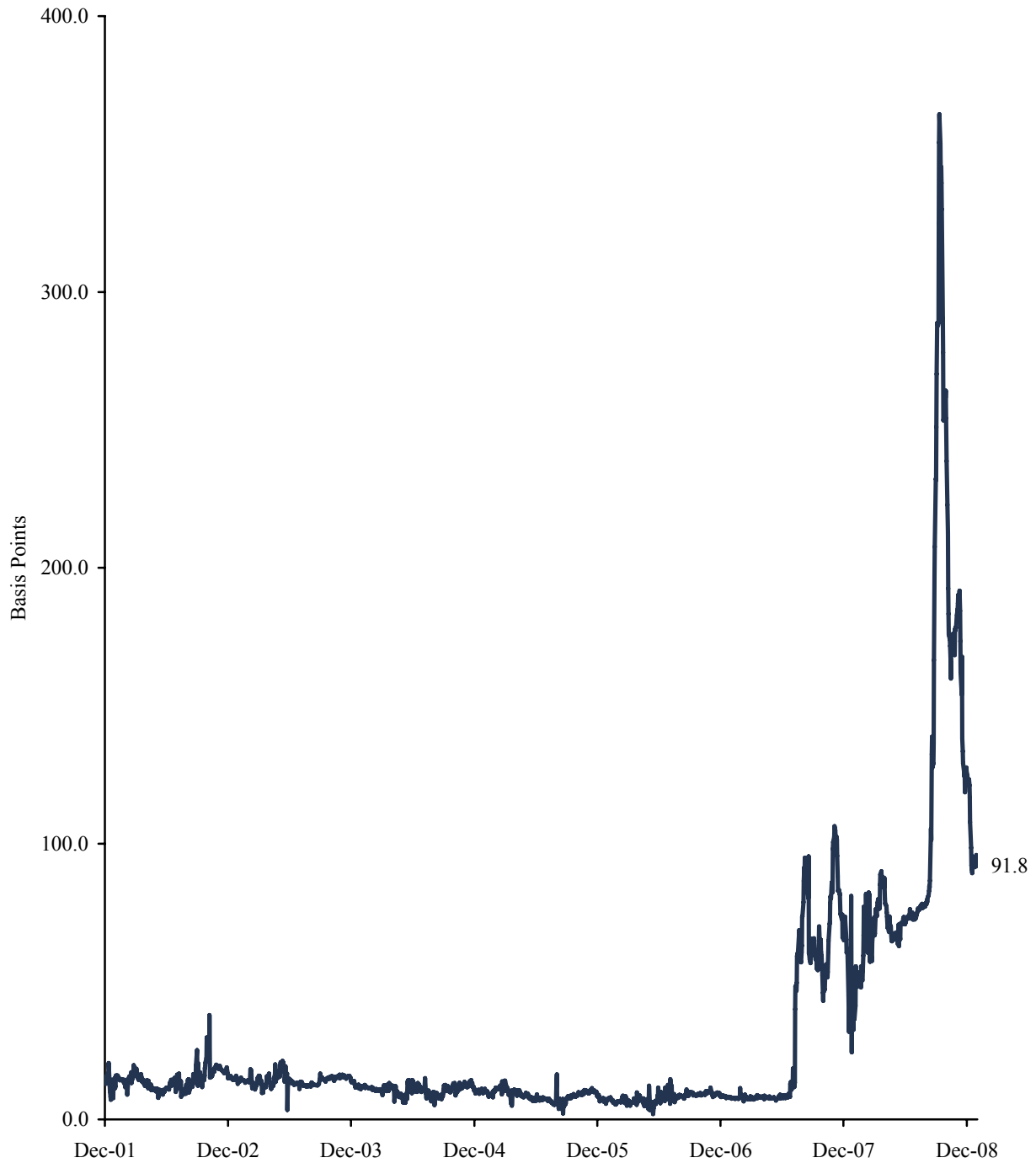
Source: Thomson Datastream.

Notes: TED spread is calculated by subtracting the three-month Treasury bill yield from the three-month Libor yield. All data are daily.

Table B

SPREAD OF LIBOR TO OVERNIGHT INDEX SWAPS

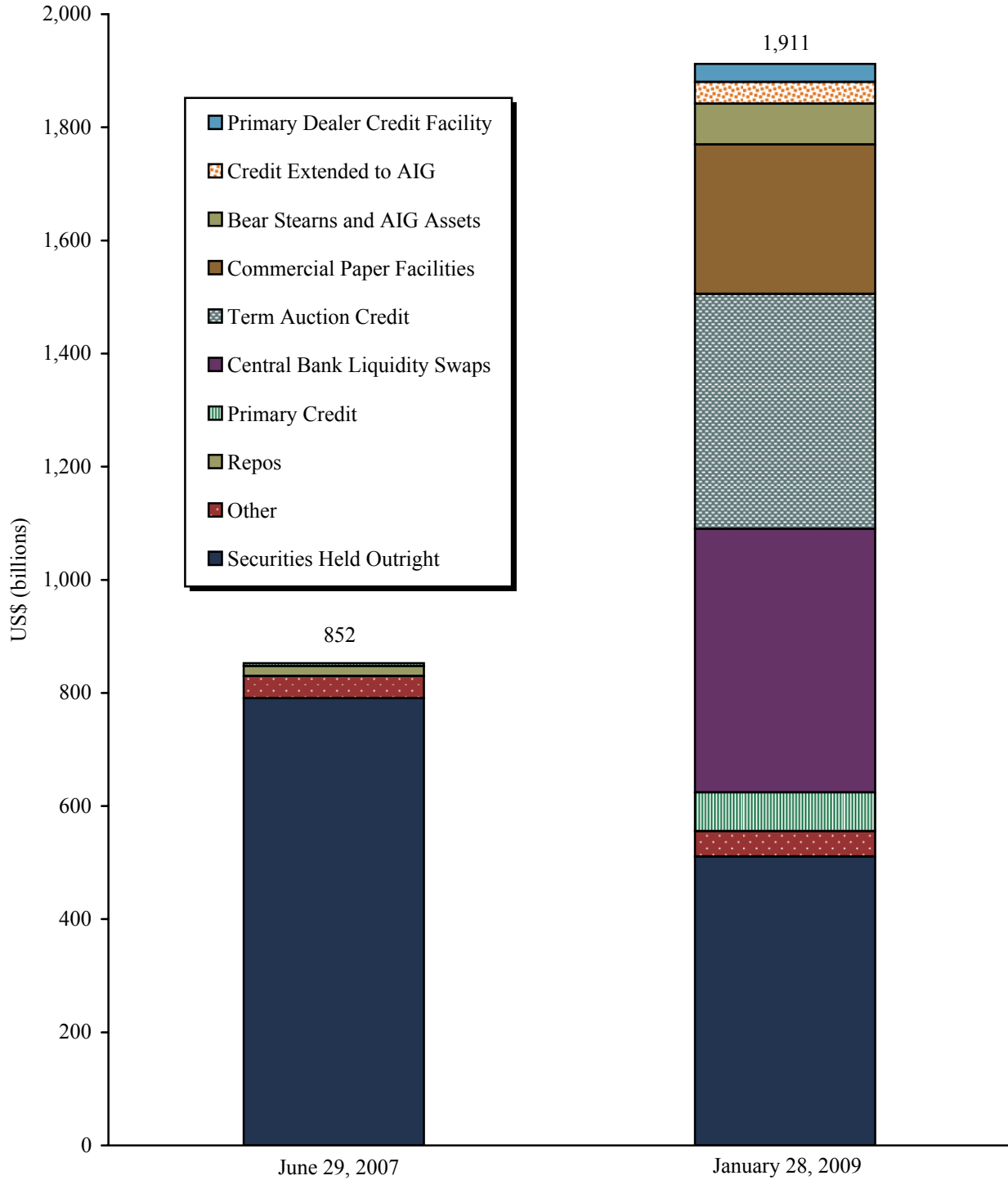
December 31, 2001 – January 31, 2009



Sources: Bloomberg L.P. and Thomson Datastream.

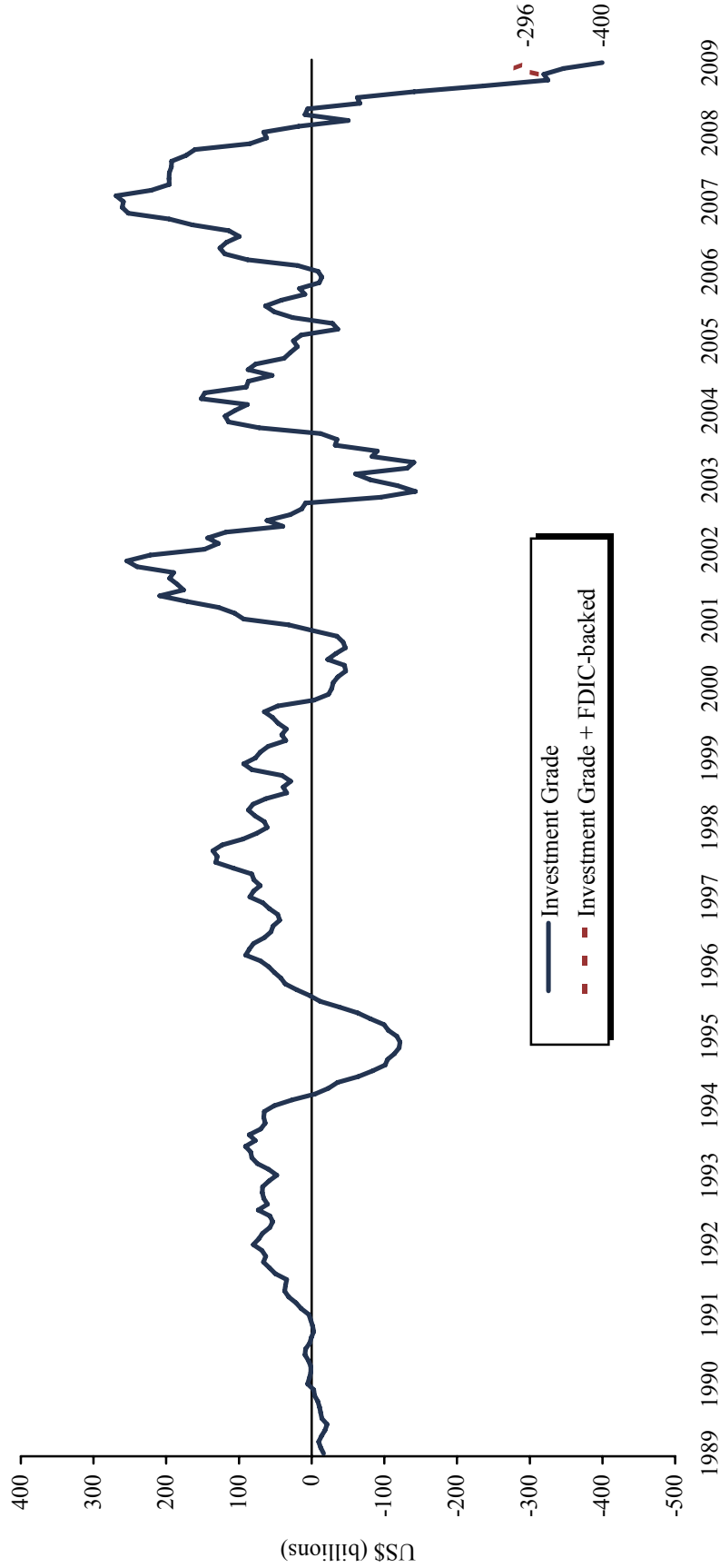
Table C

SIZE AND COMPLEXITY OF THE FEDERAL RESERVE BALANCE SHEET



Sources: Ned Davis Research, Inc. and U.S. Federal Reserve.

Table D
U.S. CORPORATE BOND ISSUANCE
Year-Over-Year Change in Rolling 12-Month Total
1989-2009

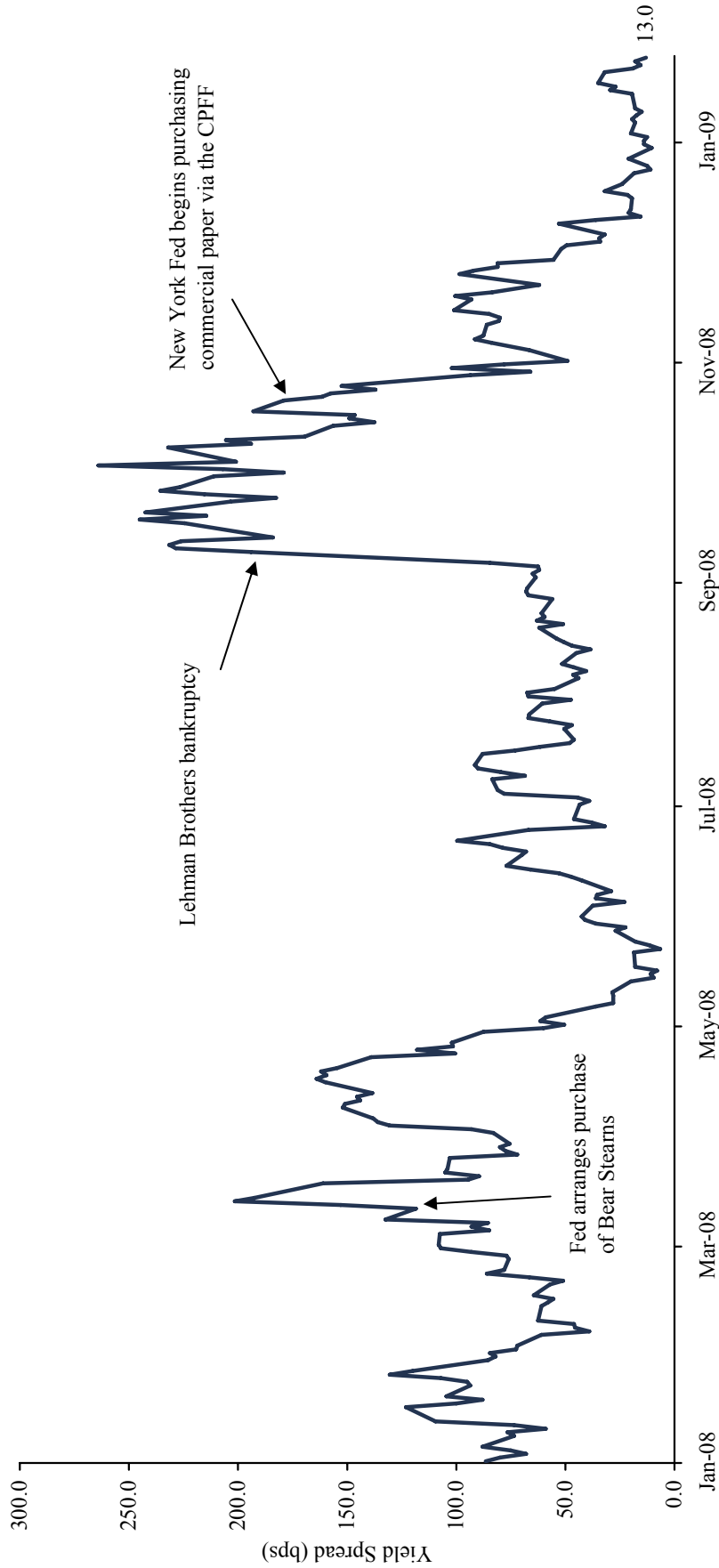


Source: Bloomberg L.P.

Notes: Graph represents monthly data. Data for 2009 are through January 27.

Table E
YIELD SPREAD OF 30-DAY COMMERCIAL PAPER OVER ONE-MONTH T-BILL

January 7, 2008 – January 31, 2009

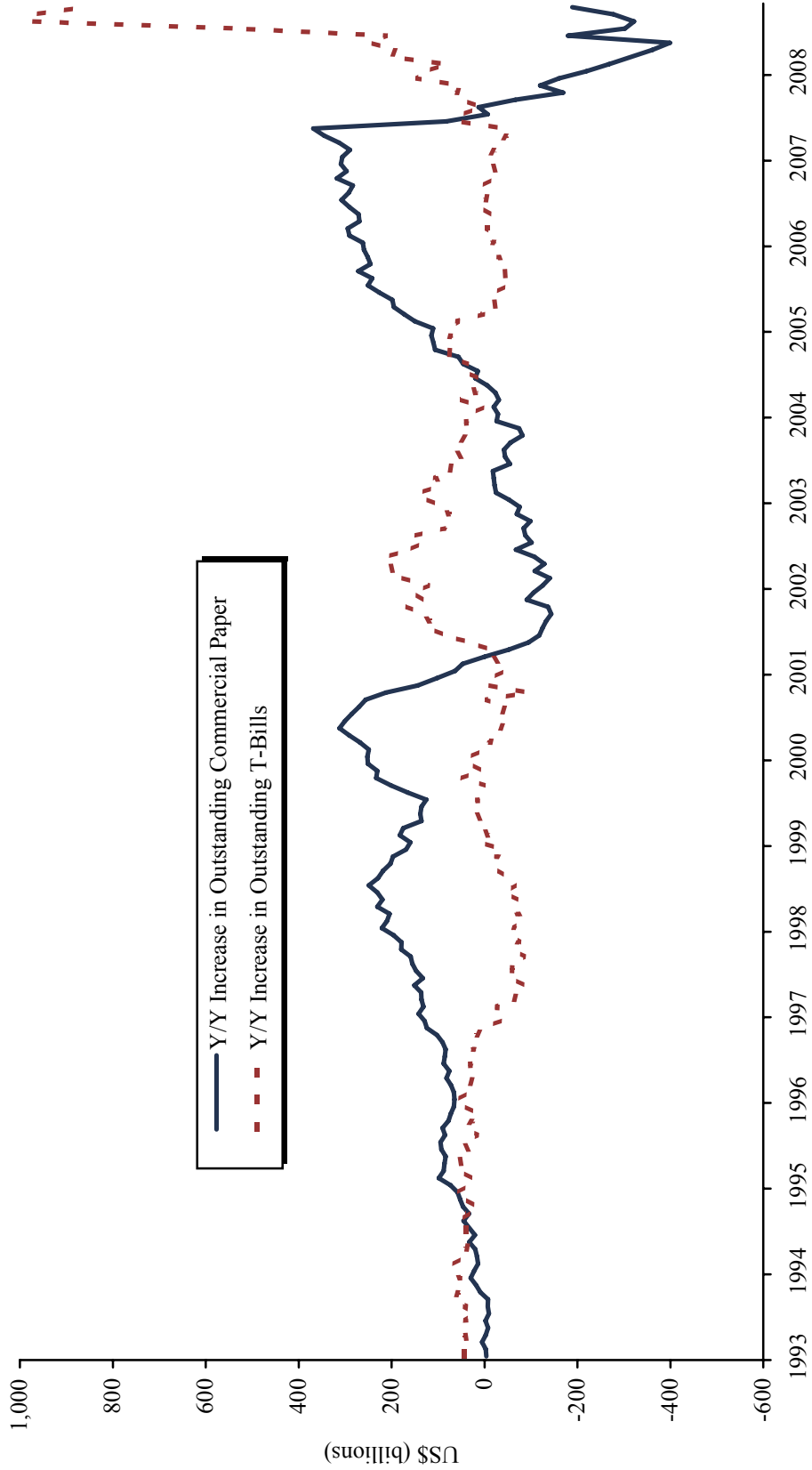


Source: U.S. Federal Reserve.

Note: The yield spread represents the yield of the one-month constant maturity T-bill subtracted from the average yield of the 30-day AA financial and 30-day AA nonfinancial categories of commercial paper.

Table F
YEAR-OVER-YEAR CHANGE IN T-BILLS AND COMMERCIAL PAPER OUTSTANDING

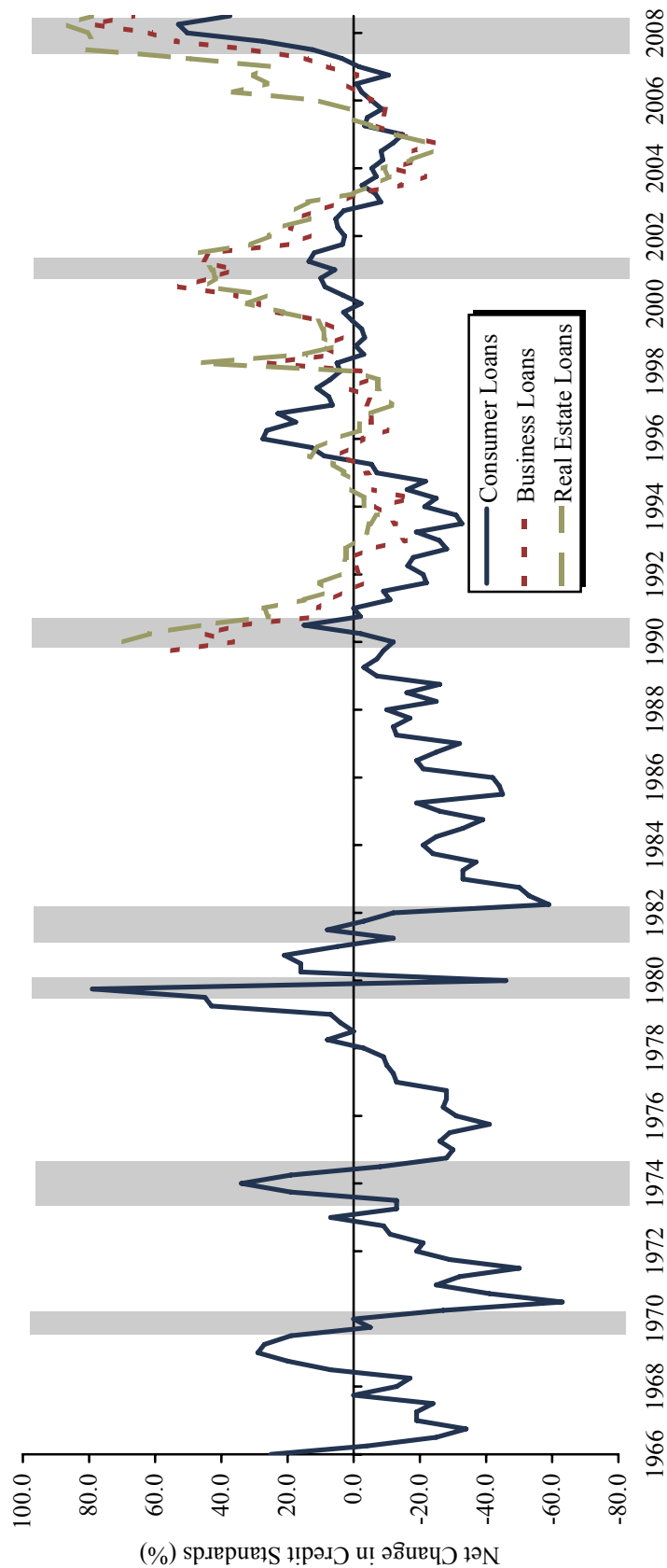
March 31, 1993 – December 31, 2008



Source: Thomson Datastream.

Table G
BANK LENDING STANDARDS

1966–2009



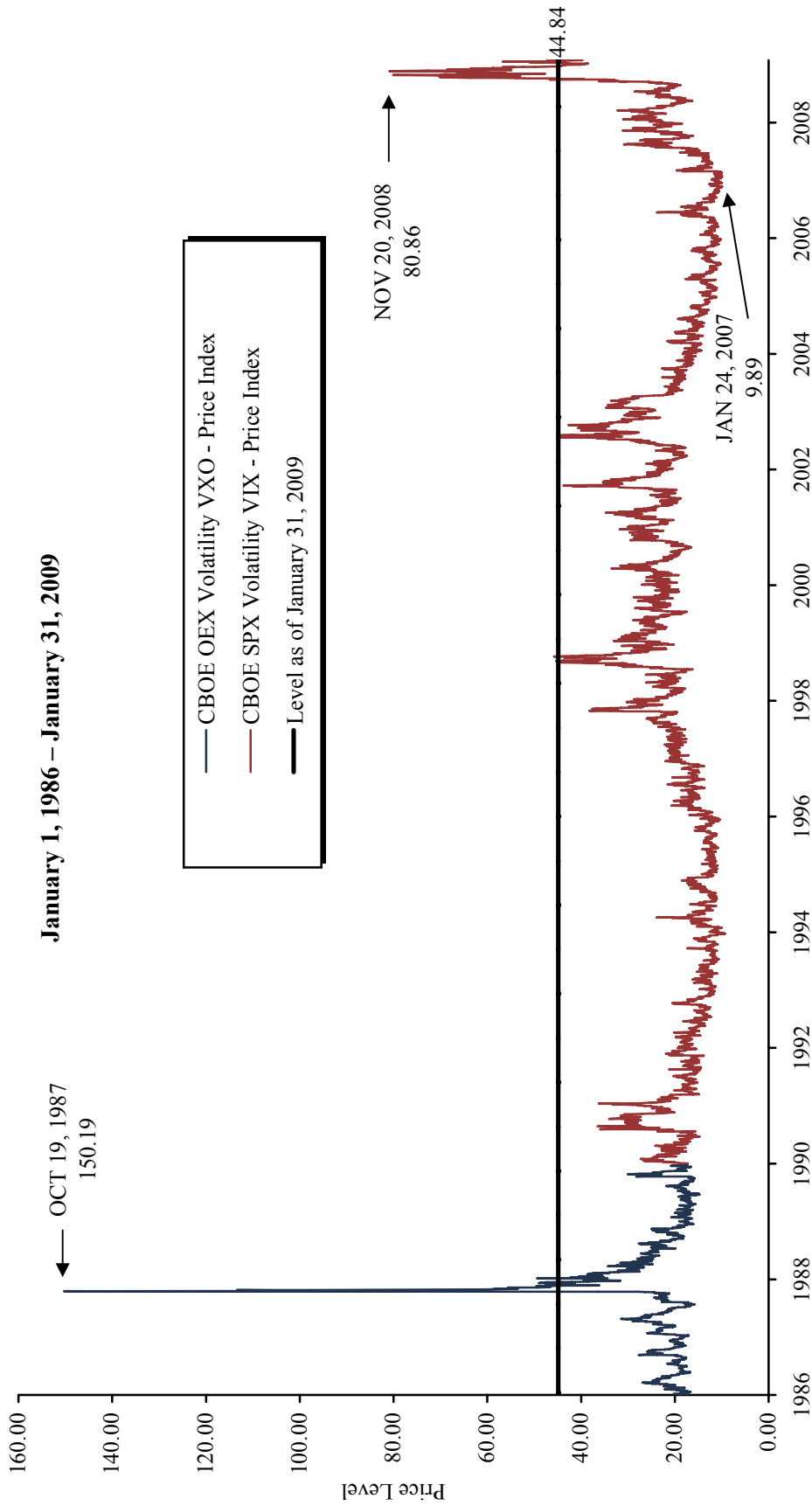
Sources: Thomson Datastream and U.S. Federal Reserve.

Notes: Business loans represent the average net percentage of U.S. banks tightening lending standards for commercial and industrial loans for large, medium, and small firms. From third quarter 1966 through fourth quarter 1995, consumer loans represent the net percentage of U.S. banks tightening lending standards for consumer installment loans. From first quarter 1996 through current, consumer loans represent the average net percentage of banks tightening lending standards for consumer installment loans and credit cards. Real estate loans represent the average net percentage of banks tightening lending standards for commercial and residential mortgage loans. Residential mortgage loans are represented by all categories of mortgage loans through first quarter 2007, and only prime mortgage loans thereafter. Shaded areas indicate NBER-defined recessions. Data for 2009 are through January 31; all other data are quarterly.

Table H

CBOE VOLATILITY INDICES

January 1, 1986 – January 31, 2009



Source: Thomson Datastream.

Notes: The VIX represents implied volatility of the S&P 500 Index and the VXO refers to the implied volatility of the S&P 100 Index, calculated using option premia. The 1987 data label refers to the VXO and subsequent data labels refer to the VIX.