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U.S. Commercial Paper: The Shrunken Market

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Conclusion

During the past 12 months, the U.S. nonfinancial commercial paper market has seen the sharpest percentage contraction in outstandings in more than 40 years. Three major causes are:

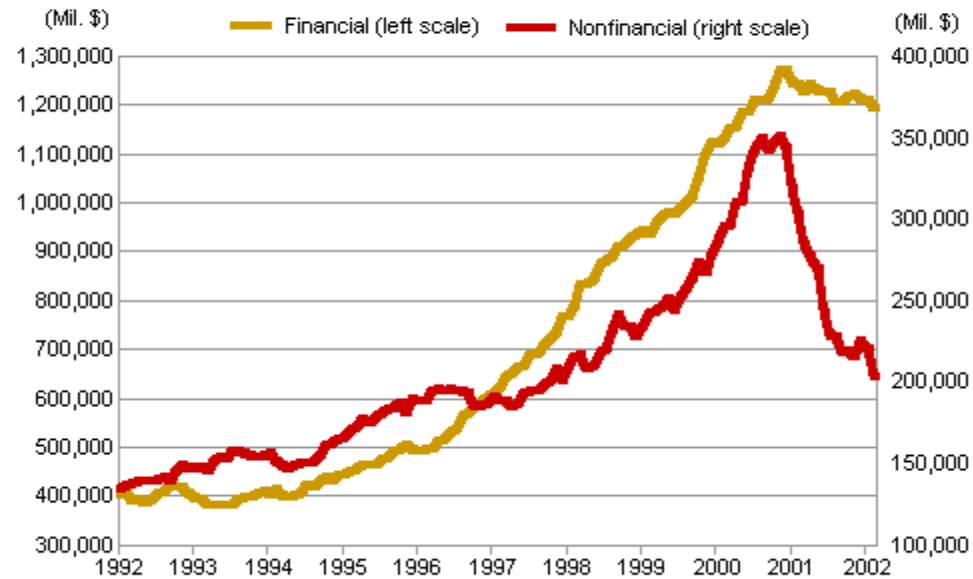
- Reduced funding needs in the economic downturn,
- Debt restructuring in a flat yield curve and low-rate environment, and
- Heightened commercial paper investor concern about credit quality during a period of credit stress, as reflected in downgrades.

As a result, many issuers that had previously financed in the unsecured commercial paper market turned to the corporate bond market, asset-backed commercial paper conduits, and bank loans.

Market Size

Currently, there is \$1.4 trillion outstanding within the U.S. commercial paper market, issued by more than 1,700 companies. Nonfinancial commercial paper outstanding peaked in the fourth-quarter 2000, at a record high of \$351 billion. Averaging 24% of the market during the past 10 years, nonfinancial commercial paper outstanding now represents 15% of the U.S. market, with \$203 billion outstanding. Financial commercial paper outstanding averaged 76% during the past 10 years and currently represents 85% of the market at \$1.2 trillion.

Chart 1
U.S. Commercial Paper Outstanding



Source: Standard & Poor's Global Fixed Income Research/Federal Reserve.

By year-end 2001, the nonfinancial commercial paper market outstanding declined 34% to \$225 billion from the levels of the previous year. This was the sharpest drop in nonfinancial commercial paper outstanding in more than 40 years, when a 52% drop was recorded. During the same period, financial commercial paper declined 4.6% to \$1.2 trillion from \$1.27 trillion.

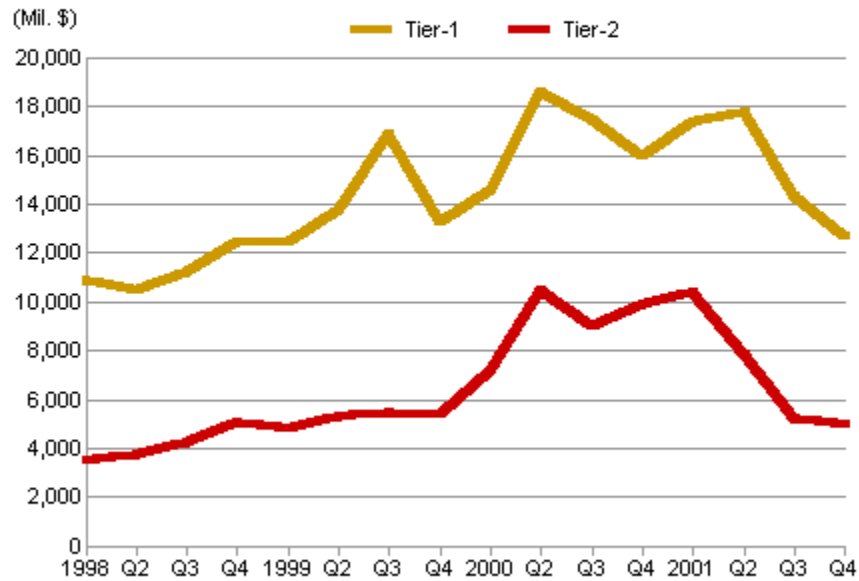
The U.S. market for all Tier 2 ('A-2' rated) commercial paper came under pressure as investors either shunned the commercial paper market or shifted funds to more highly rated borrowers. Outstandings ran as high as \$141 billion in 2000, or roughly 9% of the \$1.5 trillion U.S. commercial paper market that year. By year-end 2001, the annual average paper outstanding declined 22% to \$95 billion from \$123 billion at year-end 2000. Despite the double-digit percentage drop, this level of outstanding paper remains slightly above the \$93 billion annual average paper outstanding in 1999.

While experiencing the same pressure, all Tier 1 ('A-1+' rated and 'A-1' rated) commercial paper showed greater resilience. Tier 1 paper outstanding declined 2.4% to \$1.31 trillion between year-end 2000 and year-end 2001 from an average annual outstanding of \$1.34 trillion. Yet, this level of outstanding paper remains well above the \$1.13 trillion at year-end 1999.

Correspondingly, average daily issuance of Tier 1 and Tier 2 U.S. nonfinancial commercial paper has also returned to 1999 levels. Fourth-quarter 1999 experienced average daily issuance for Tier 1 nonfinancial commercial paper at \$13.3 billion and for Tier 2 paper at \$5.4 billion. Average daily Tier 1 and Tier 2 nonfinancial commercial paper issuance increased by the fourth quarter of 2000 to \$16.0 billion and \$9.9 billion, respectively. From these levels, issuance declined to \$12.7 billion and \$4.9 billion for Tier 1 and Tier 2, respectively, by fourth-quarter 2001.

In contrast, Tier 1 financial commercial paper average daily issuance rose 136% to \$34.1 billion in fourth-quarter 2000 from a historic low of \$14.5 billion one year earlier. By the fourth quarter of 2001, average daily issuance of financial commercial paper fell to \$25.9 billion, well above the 1999 average.

Chart 2
U.S. Nonfinancial Commercial Paper
 (Average Daily Issuance by Quarter)



Source: Standard & Poor's Global Fixed Income Research/Federal Reserve.

As of Feb. 27, 2002, \$1.40 trillion in total commercial paper was outstanding. This marks the lowest level since the last quarter of 1999 and is 2.8% lower than year-end 2001 with \$1.44 trillion outstanding. Much of 2002's decline can be attributed to nonfinancial commercial paper outstanding at a low of \$203 billion, a level not seen since the fourth quarter of 1997, and down 9.7% from year-end 2001 when \$224.8 billion was outstanding. In comparison, financial commercial paper outstanding is currently at \$1.20 trillion, just 1.5% below \$1.21 trillion at year-end 2001, a level seen as recently as mid 2000.

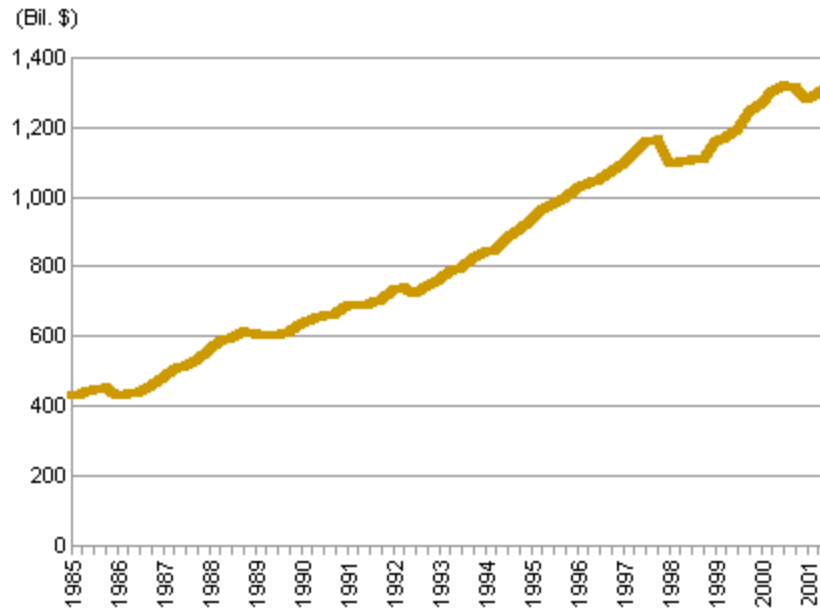
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Reduction in Funding Needs

A slower economic climate contributed to the decline in commercial paper issuance, in part, by reducing companies' needs for short-term funds, typically used to finance inventory. While corporate cash flows remained steady from 2000, capacity utilization and nonfarm inventories dropped sharply. Average

annual corporate cash flow for 2001 through the third quarter hit \$1.3 trillion, nearly identical to \$1.3 trillion set in the full year of 2000. In contrast, capacity utilization fell 6.2% from year-end 2000 to year-end 2001, and the average change in quarterly inventories declined from 51% growth in 2000 to an average quarterly contraction of 57% in 2001.

Chart 3
Corporate Cash Flow
(Quarterly)



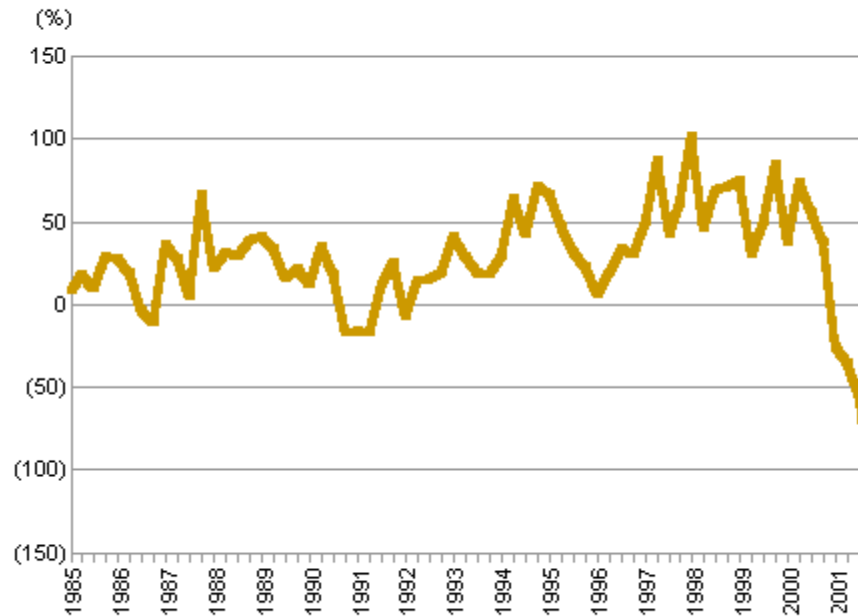
Source: Standard & Poor's Global Fixed Income Research/Federal Reserve.

Chart 4
Capacity Utilization
(Monthly)



Source: Standard & Poor's Global Fixed Income Research/Federal Reserve.

Chart 5
Nonfarm Inventories
(Quarterly)



Note: Data indicates quarterly change in nonfarm inventory levels. Source: Standard & Poor's Global Fixed Income Research/Federal Reserve.

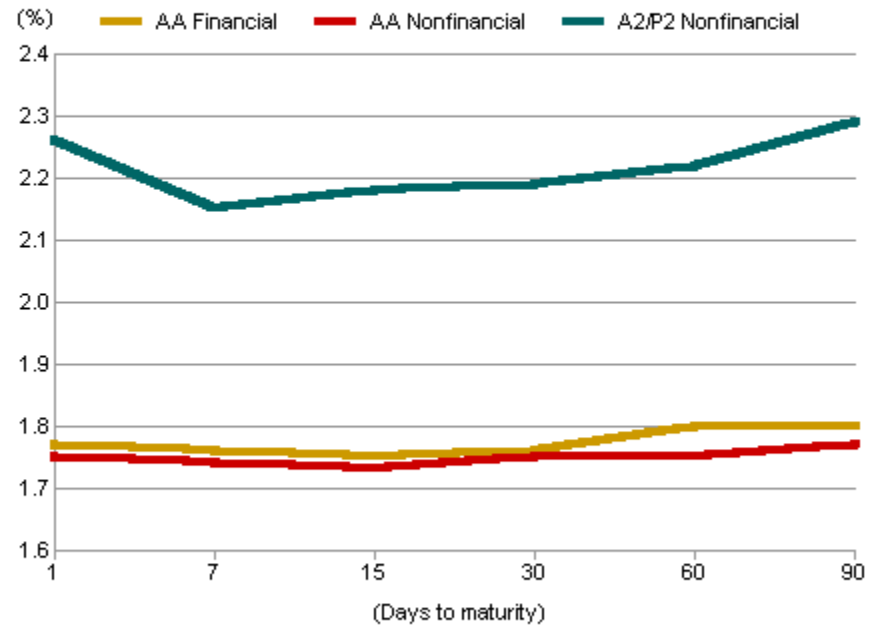
As a result, the financing gap needed to fund firms' current operations, previously met by commercial paper issuance, narrowed.

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Restructure Debt

Coinciding with changes in the economic climate, a flat Treasury yield curve and near historically low yield levels provided an attractive opportunity for companies to restructure their debt. This combination allowed for corporations to raise long-term funds at near short-term rates. For example, at the beginning of 2001, an average 'AA' rated corporate bond had a yield of 5.98% for a one-year maturity, 6.43% for a 10-year maturity, and 7.25% percent for a 25-year maturity, compared with 30-day nonfinancial commercial paper rates at 6.45%.

Chart 7
U.S. Commercial Paper Yield Curve
(Constant Maturities)



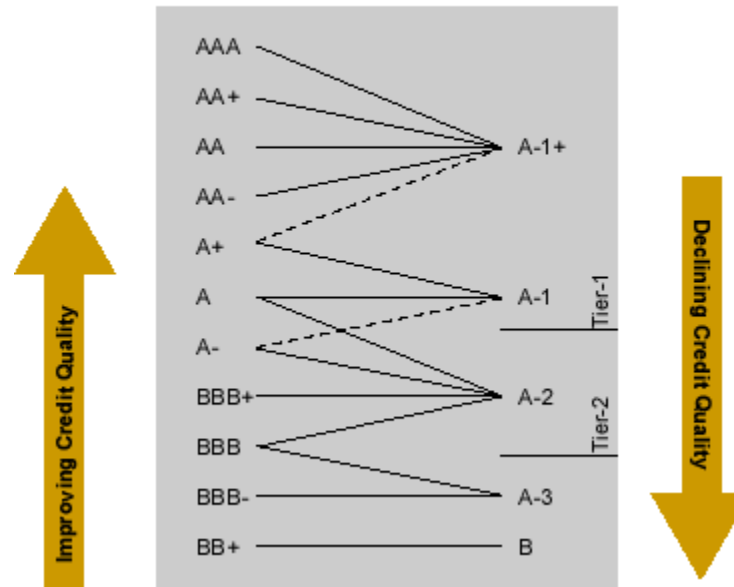
As of Feb. 25, 2002. Source: Standard & Poor's Global Fixed Income Research/Federal Reserve.

The 475 basis points (bps) reduction over 11 Fed Funds rate cuts in 2001 helped bring the three-month commercial paper rates down to 1.78%. These rate cuts steepened the Treasury yield curve, resulting in an average 'AA' rated corporate bond yield of 3.13% for a one-year maturity, and 6.73% for a 25-year maturity as of Feb. 19, 2002.

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Rating Actions

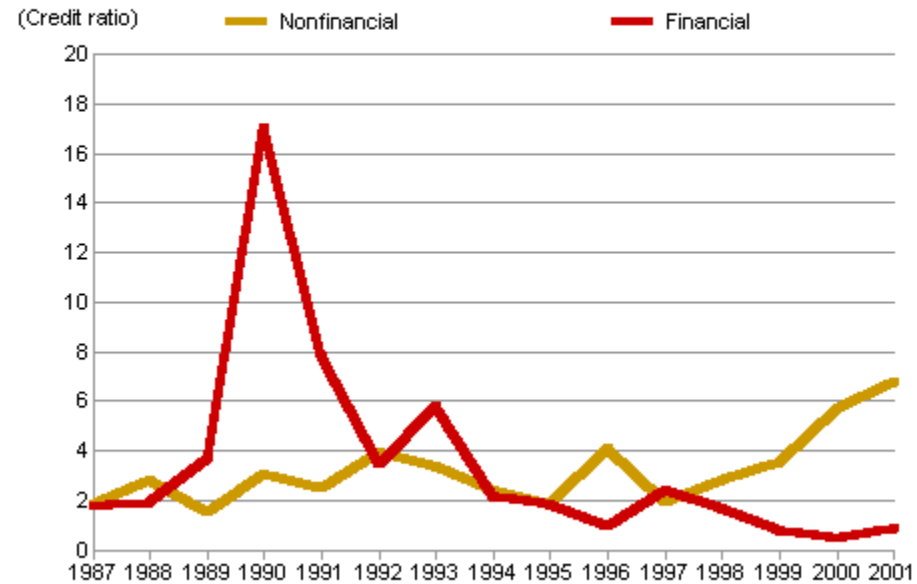
Correlation of CP Ratings with Long-Term Corporate Credit Ratings



During the past five years, the downward pressure on ratings intensified on nonfinancial commercial paper. In 1997, across all rating categories, nonfinancial and financial commercial paper experienced 1.9 and 2.4 downgrades per upgrade, respectively. By 2001, downgrades per upgrades for nonfinancial commercial paper grew to 6.7 to one (121 downgrades to 18 upgrades), while financial commercial paper fell to 0.9 to one (16 downgrades to 18 upgrades).

Chart 8

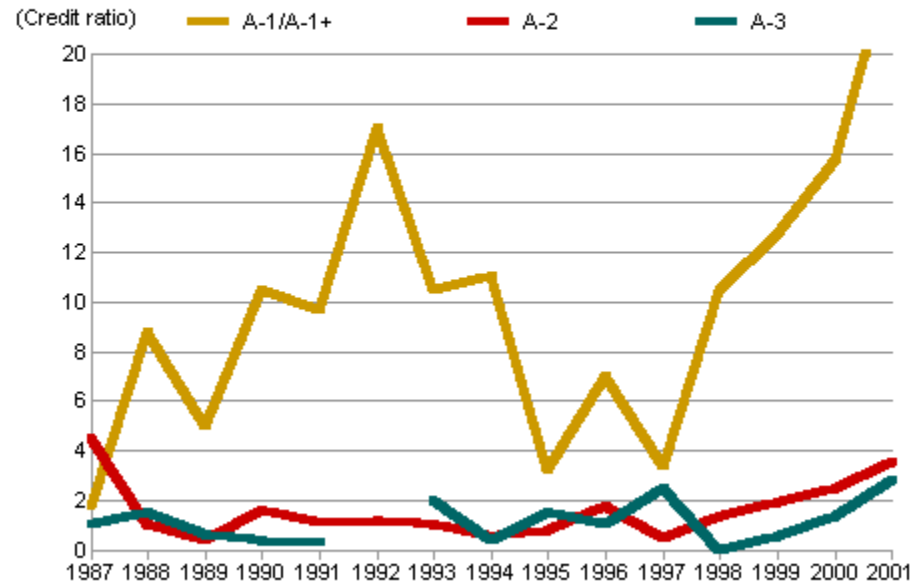
U.S. Commercial Paper Downgrade/Upgrade Ratio



Source: Standard & Poor's Global Fixed Income Research/Federal Reserve.

Tier 1 ('A-1+' rated and 'A-1' rated) nonfinancial commercial paper was hardest hit, experiencing increased stress from 1997's low of 3.4 downgrades for each upgrade. By 2001, the highest ratio in more than 14 years was set with 23.7 downgrades per upgrade, based on 71 downgrades and only three upgrades. During the same period, 'A-2' rated and 'A-3' rated nonfinancial commercial paper never exceeded 3.5 downgrades per upgrade, ending 2001 at 3.5 and 2.75 downgrades per upgrade, respectively.

Chart 9
**U.S. Nonfinancial Commercial Paper
 Downgrade/Upgrade Ratio**



Source: Standard & Poor's Global Fixed Income Research/Federal Reserve.

These Tier 1 downgrades carry significant impact, not just because of the higher costs associated for issuers, but also because the smaller 'A-2' rated commercial paper market is insufficient to meet adequately the demands of a market that is overcrowded because of rating downgrades. Money market funds, large purchasers of commercial paper, can only hold 5% of their holdings in commercial paper rated below 'A-1+/A-1'. As Tier 1-rated paper is downgraded, these funds are not able to purchase the less creditworthy paper, thereby squeezing many issuers out of the market. Nevertheless, most companies have managed orderly withdrawal from the commercial paper market.

| Prominent Issuers of Commercial Paper Programs Downgraded in 2001 | | | | |
|---|-----|--------------------------|----------|--------------|
| From | To | Issuer | Date | Sector |
| A-2 | A-3 | American Greetings Corp. | 4/9/2001 | Nonfinancial |

| | | | | |
|-----|-----|---------------------------------|------------|--------------|
| A-1 | A-2 | AT&T Corp. | 10/29/2001 | Nonfinancial |
| A-1 | A-2 | British Telecommunications PLC | 5/10/2001 | Nonfinancial |
| A-2 | B | Comdisco Inc. | 4/3/2001 | Financial |
| B | C | Comdisco Inc. | 6/27/2001 | Financial |
| C | D | Comdisco Inc. | 7/16/2001 | Financial |
| A-1 | A-2 | Corning Inc. | 7/9/2001 | Nonfinancial |
| A-1 | A-2 | DaimlerChrysler AG | 2/26/2001 | Nonfinancial |
| A-2 | A-3 | Dana Corp. | 5/10/2001 | Nonfinancial |
| A-3 | B | Dana Corp. | 12/11/2001 | Nonfinancial |
| A-2 | A-3 | Dial Corp. (The) | 8/3/2001 | Nonfinancial |
| A-1 | A-2 | Eastman Kodak Co. | 10/25/2001 | Nonfinancial |
| A-2 | A-3 | Edison Funding Co. | 1/5/2001 | Financial |
| A-3 | C | Edison Funding Co. | 1/16/2001 | Financial |
| A-1 | A-3 | Edison International | 1/4/2001 | Nonfinancial |
| A-3 | C | Edison International | 1/16/2001 | Nonfinancial |
| A-2 | A-3 | Enron Corp. | 11/1/2001 | Nonfinancial |
| A-1 | A-2 | Ford Motor Co. | 10/15/2001 | Nonfinancial |
| A-1 | A-2 | Ford Motor Credit Co. | 10/15/2001 | Financial |
| A-1 | A-2 | Gap Inc. (The) | 10/29/2001 | Nonfinancial |
| A-1 | A-2 | General Motors Acceptance Corp. | 10/15/2001 | Financial |
| A-1 | A-2 | General Motors Corp. | 10/15/2001 | Nonfinancial |
| A-1 | A-2 | Hertz Corp. | 10/15/2001 | Nonfinancial |
| A-2 | A-3 | Lucent Technologies Inc. | 2/12/2001 | Nonfinancial |
| A-3 | B | Lucent Technologies Inc. | 6/12/2001 | Nonfinancial |
| B | C | Lucent Technologies Inc. | 7/31/2001 | Nonfinancial |
| A-1 | A-2 | Motorola Inc. | 5/21/2001 | Nonfinancial |
| A-1 | A-2 | Nordstrom Inc. | 1/12/2001 | Nonfinancial |
| A-1 | A-2 | Nortel Networks Ltd. | 7/18/2001 | Nonfinancial |
| A-2 | A-3 | Nortel Networks Ltd. | 10/3/2001 | Nonfinancial |
| A-1 | A-3 | PG&E Corp. | 1/4/2001 | Nonfinancial |
| A-3 | C | PG&E Corp. | 1/16/2001 | Nonfinancial |
| C | D | PG&E Corp. | 1/19/2001 | Nonfinancial |
| A-1 | A-2 | Walt Disney Co. | 10/15/2001 | Nonfinancial |
| A-1 | A-2 | Weyerhaeuser Co. | 6/7/2001 | Nonfinancial |
| | | | | |

| | | | | |
|-----|---|-------------|------------|--------------|
| A-3 | B | Xerox Corp. | 10/23/2001 | Nonfinancial |
|-----|---|-------------|------------|--------------|

So far in 2002, the market has seen three commercial paper upgrades and 23 downgrades. Nonfinancial commercial paper has had zero upgrades and 14 downgrades, while financial commercial paper has had three upgrades and nine downgrades. Six programs of commercial paper were downgraded below Tier 1, and six additional programs were downgraded below Tier 2.

| Prominent Issuers of Commercial Paper Programs Downgraded in 2002 | | | | |
|---|-----|---|-----------|--------------|
| From | To | Issuer | Date | Sector |
| A-2 | A-3 | Avaya Inc. | 1/29/2002 | Nonfinancial |
| A-1+ | A-1 | Boeing Co. | 2/5/2002 | Nonfinancial |
| A-2 | B | Gap Inc. (The)* | 2/14/2002 | Nonfinancial |
| A-3 | B | Goodyear Tire & Rubber Co. (The) | 1/18/2002 | Nonfinancial |
| A-1 | A-2 | Great Lakes Chemical Corp. | 1/11/2002 | Nonfinancial |
| A-1 | A-3 | Tyco International Ltd. | 2/4/2002 | Nonfinancial |
| A-2 | A-3 | Qwest Communications International Inc. | 2/14/2002 | Nonfinancial |

*Downgraded from 'A-1' to 'A-2' on Oct. 29, 2001.

CreditWatch.

Although downward pressure on ratings in the commercial paper market continues, the pace of downgrades appears to be abating. Out of the Tier 1, nonfinancial commercial paper issuers that Standard & Poor's rates, 3.7% of the commercial paper programs are on CreditWatch with negative implications. Under less pressure are Tier 1 financial commercial paper issuers, with 0.8 percent of programs on CreditWatch with negative implications.

Similarly, 2.7% of Tier 2 nonfinancial commercial paper programs are on CreditWatch with negative implications. There are no Tier 2 financial commercial paper programs currently on CreditWatch with negative implications.

| Commercial Paper Programs on CreditWatch/Negative* | | |
|--|---|--------------|
| A-1+ | Government Development Bank for Puerto Rico | Financial |
| A-1+ | Hewlett-Packard Co. | Nonfinancial |
| A-1 | Allegheny Energy Inc. | Nonfinancial |
| A-1 | ALLTEL Corp. | Nonfinancial |

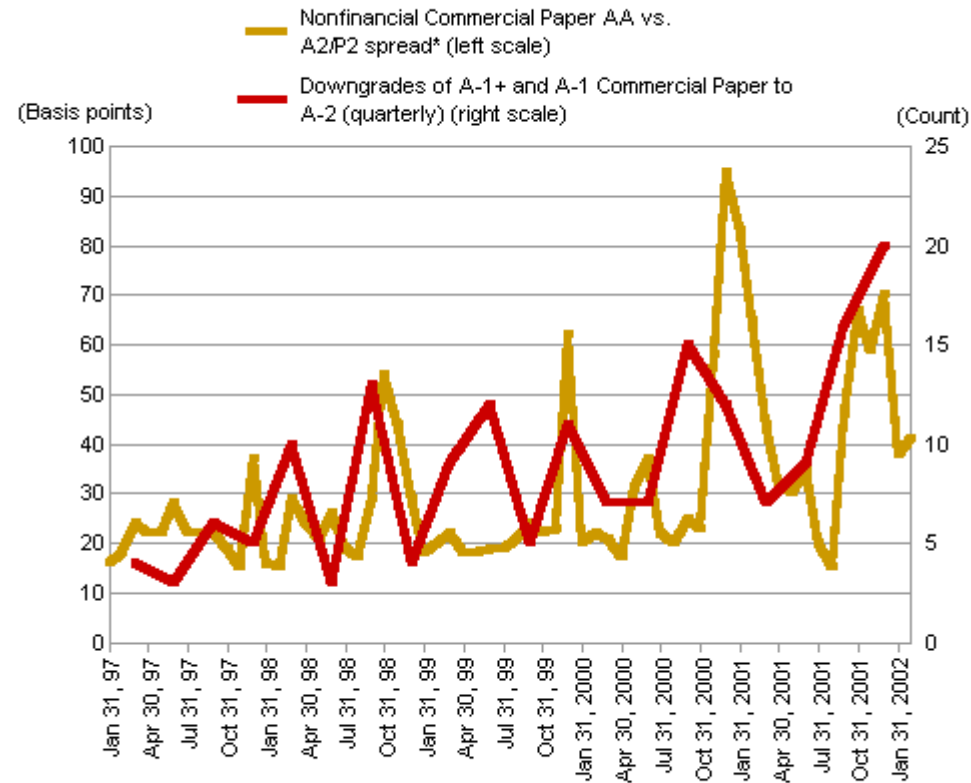
| | | |
|-----------------------|---------------------------------|--------------|
| A-1 | Carnival Corp. | Nonfinancial |
| A-1 | Consolidated Edison, Inc. | Nonfinancial |
| A-1 | Constellation Energy Group Inc. | Nonfinancial |
| A-1 | Northwest Natural Gas Co. | Nonfinancial |
| A-1 | Potomac Electric Power Co. | Nonfinancial |
| A-2 | Cinergy Corp. | Nonfinancial |
| A-2 | Dynegy Inc. | Nonfinancial |
| A-2 | Temple-Inland Inc. | Nonfinancial |
| A-2 | TRW Inc. | Nonfinancial |
| A-2 | Williams Companies Inc. (The) | Nonfinancial |
| A-2 | Xcel Energy Inc | Nonfinancial |
| A-3 | Potlatch Corp. | Nonfinancial |
| *As of March 5, 2002. | | |

Spreads.

Spread levels between Tier 1 and Tier 2 nonfinancial commercial paper have experienced an overall widening trend since 1997. Increases in the quarterly downgrades of Tier 1 nonfinancial commercial paper to Tier 2 credit quality have preceded each recent peak in spread level. The most recent peak in spreads occurred at year-end 2001 at 70 bps, up from the four-year low of 15 bps in August 2001. The previous peak occurred at year-end 2000 at 95 bps.

While the recent spread level has tightened to 41 bps, it remains well above the five-year average of 30 bps and matches the 41 bps two-year average. Given the level of downgrades and continued credit quality concerns, some Tier 2 buyers are questioning if they are being adequately compensated. Many buyers are risk-averse at any price and exiting the market, thereby reducing the potential universe of buyers in the Tier 2 credit market, already overcrowded by credit downgrades.

Chart 10
Tier 1 vs. Tier 2 Spreads



*Based on 30-day nonfinancial commercial paper discount rates. Source: Standard & Poor's Global Fixed Income Research/Federal Reserve.

As many issuers were either forced out of the unsecured commercial paper market or chose to exit, alternative financing was found in the corporate bond, asset-backed commercial paper and bank loan markets.

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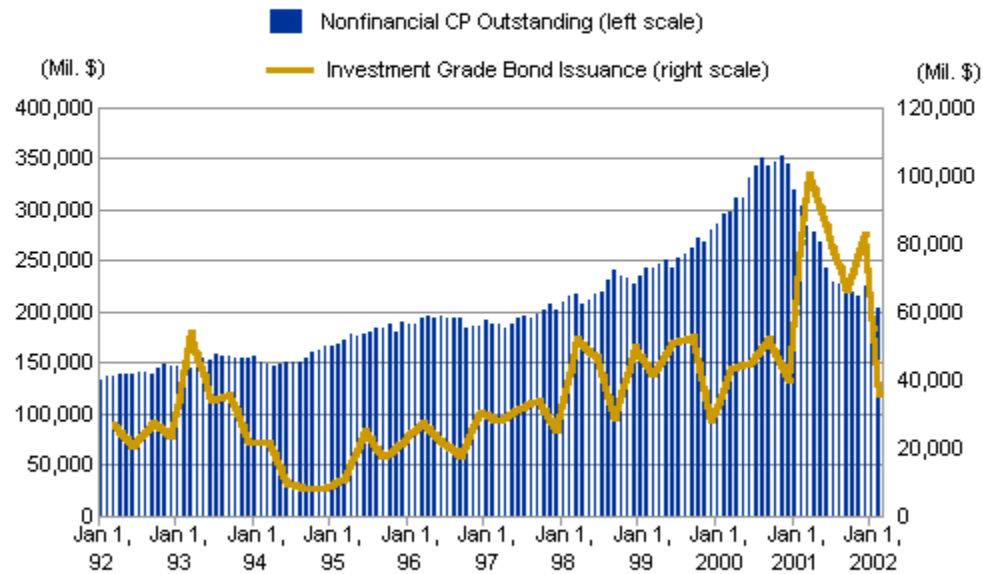
Corporate Bond Issuance

Following the decline in nonfinancial commercial paper outstanding through

2001, nonfinancial investment-grade bond issuance spiked to a first-quarter 2001 high of \$100.7 billion from fourth-quarter 2000, with \$39.7 billion in bond issuance. While off from this early peak, investment-grade new issuance remained at elevated levels throughout the second, third, and fourth quarters of 2001 at \$85.2 billion, \$66.3 billion, and \$82.9 billion, respectively, as many companies issued another type of debt to extend maturity.

Chart 11

U.S. Commercial Paper Outstanding vs. Investment Grade Bond Issuance



Source: Standard & Poor's Global Fixed Income Research/Federal Reserve.

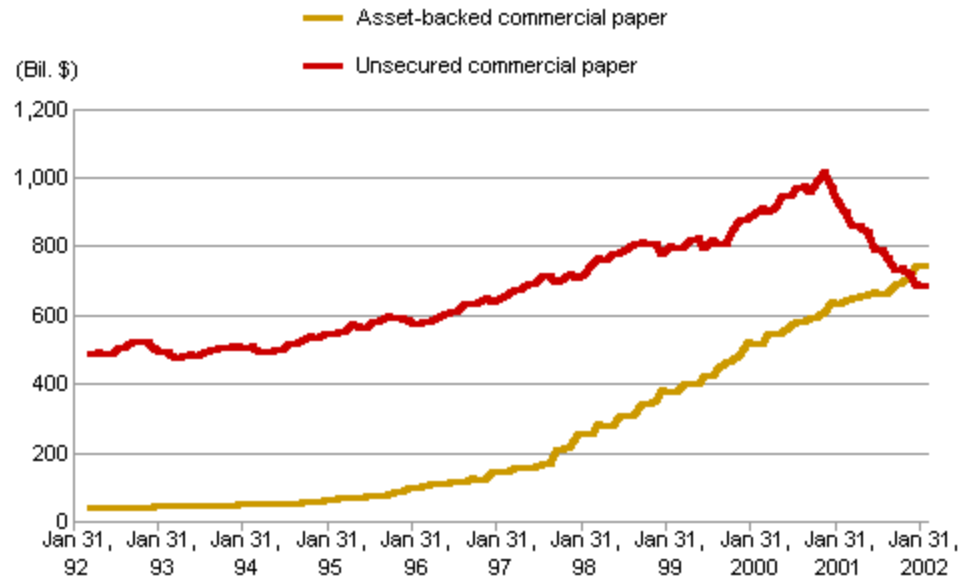
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Growth of Asset-backed Commercial Paper Conduits

Some issuers raised funds in asset-backed commercial paper conduits. The migration to asset-backed commercial paper from unsecured has been a long-term structural trend. The current economic cycle buoyed the trend as outstanding asset-backed commercial paper surpassed unsecured commercial paper for the first time in 2001. Growing 23%, to \$642 billion in 2000, the asset-backed commercial paper market grew an additional 16% to

\$745 billion by year-end 2001 and outpaced the \$694 billion unsecured commercial paper market. During the past two years, Standard & Poor's rated 28 new asset-backed commercial paper conduits in the U.S. market. Outstandings will continue to grow, as it takes a year after inception to reach program size.

Chart 12
**Asset-Backed vs. Unsecured
 Commercial Paper Outstanding**



Source: Standard & Poor's Global Fixed Income Research/Federal Reserve.

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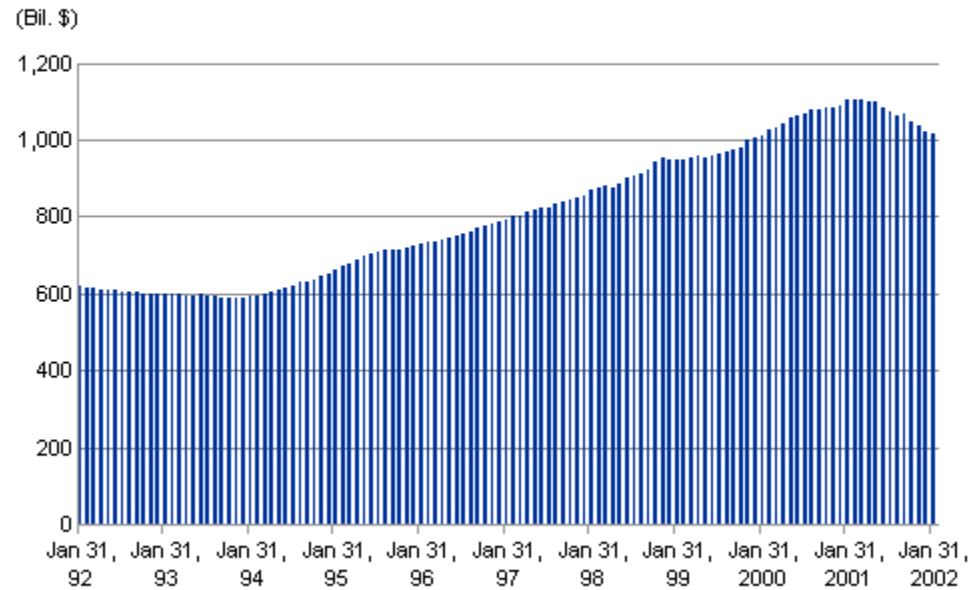
Tapping Bank Lines

Some issuers with downgraded commercial paper programs have been forced to raise funds by turning to the more expensive option of bank loans. In 2000, U.S. commercial and industrial bank loans increased 8.7% to \$1.09 trillion from \$1.01 trillion. In contrast, 2001 saw a modest 5.0% decrease in these bank loans, falling to \$1.04 trillion by November.

Notably, this decline coincided with a period of slow business activity, with

sharp falls in nonfarm inventory levels and capacity utilization; refinancing of bank loans in the corporate bond market; banks' tightening credit standards; and banks' securitization. During the early 1990s, the level of bank loans dipped in a period of slower economic activity. This suggests that the recent level of bank loans may have decreased further were it not for support received from companies tapping their bank lines.

Chart 13
U.S. Commercial & Industrial Bank Loans



Source: Standard & Poor's Global Fixed Income Research/Federal Reserve.

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Conclusion

During the past 12 months, the movement in the U.S. nonfinancial commercial paper market has provided an example of the cyclical nature of a financial market. The slower economic climate began to reduce companies' needs for short-term funds. As a result, the need for commercial paper issuance declined. A flat Treasury yield curve and near historically low yield levels provided opportunity for companies to restructure their debt and extend

maturities. Pressure was then added to the cycle when those who invested in commercial paper developed growing concerns about credit quality during a period of credit stress.

As many issuers were either forced out of the unsecured commercial paper market or chose to exit, alternative financings were found in the corporate bond, asset-backed commercial paper, and bank loan markets. Outstanding asset-backed commercial paper surpassed unsecured commercial paper for the first time in 2001, bringing a long-term trend to a peak and illustrating another option for companies that exited the unsecured commercial paper market.

Other issuers turned to bank loans as a means of raising funds. As mentioned previously, recent bank loan levels may have decreased further were it not for companies tapping their bank lines to replace commercial paper.

Those few issuers that have had problems raising funds have tended to be sector-specific or credit-specific. They also have been hampered by complex corporate structures, questionable accounting practices, or "headline risk." Those issuers that have managed liquidity conservatively have taken both a "belt and suspenders" approach by:

- Maintaining sufficient bank lines,
- Reducing reliance on the short-term market by issuing other debt to extend maturity,
- Actively managing working capital, and
- Having excess liquidity on hand. Although not cost effective, excess liquidity can get a company through a stress period.

By employing these options, the commercial paper market will repair itself as the cycle continues and the economy improves. Issuers whose focus was on liquidity and contingency planning going into the cycle have weathered recent events more successfully than others.

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