

STANDARD  
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# Fund Ratings Criteria





# Fund Ratings Criteria

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# Process & Overview

A Standard & Poor's Ratings Services rating is based on principles of independence, integrity, and disclosure—the same standards that underlie market confidence and acceptance of our ratings by investors worldwide. Our processes are designed to ensure that our rating opinions are based on consistently applied quantitative and qualitative analytic criteria.

Since 1984, Standard & Poor's has assigned principal stability fund ratings, credit quality ratings, and volatility ratings to fixed-income funds globally, including mutual funds, money market funds, enhanced cash funds, preferred trusts, government investment pools, separate accounts, exchange traded funds, hedge funds, and unit investment trusts. The goals of our analysis are to uncover risk sources in a managed fund's portfolio and investment strategies and to assess the potential impact on its ability to meet its objectives.

### Principal Stability Fund Ratings

A Standard & Poor's Principal Stability fund rating, also known as a money-market fund rating, is a current opinion of a fund's capacity to maintain stable principal or net asset value. When assigning a Principal Stability rating to a fund, we evaluate the creditworthiness of a fund's investments and counterparties, the market price exposure of its investments, sufficiency of the fund's portfolio liquidity, and management's ability and policies to maintain the fund's stable net asset

value by limiting exposure to loss. In our view, funds that seek to maintain a stable net asset value should be managed conservatively with well-defined guidelines and investment policies (for example: within SEC Rule 2a-7 guidelines) with regard to average maturity, credit quality, and liquidity. Funds managed outside of these guidelines can or may be rated on the Fund Credit Quality and Volatility Scale.

Principal Stability fund ratings express our opinion regarding a fund's ability to maintain principal stability and to limit exposure to losses due to credit, market, and/or liquidity risks. The rating categories range from 'AAA<sub>m</sub>' (extremely strong capacity to maintain principal stability and to limit exposure to principal losses due to credit, market, and/or liquidity risks) to 'D<sub>m</sub>' (failure to maintain principal stability resulting in a realized or unrealized loss of principal). The 'm' distinguishes the Principal Stability fund ratings from Standard & Poor's traditional debt ratings, which are usually not subscribed and which indicate a borrower's ability to repay principal and interest on a timely basis. A Principal Stability fund rating is

not directly comparable to a debt rating because of differences in investment characteristics, rating criteria, and the creditworthiness of portfolio investments.

### Fund Credit Quality Ratings

Standard & Poor's Fund Credit Quality ratings are assigned to all types of fixed-income funds or portfolios with fluctuating or variable net asset values, including bond funds, local government investment pools, unit investment trusts, preferred shares trusts, cash enhanced funds, and fixed-income hedge funds, among others. Our fund credit quality ratings are identified by the subscript 'f' for "fund" and represent our assessment of the overall credit quality of a fund's portfolio holdings. The fund credit rating reflects the level of protection that the fund's portfolio provides against losses from credit defaults. Rating categories range from 'AAAF' (highest protection against losses from credit defaults) to 'CCCF' (extremely vulnerable to losses from credit defaults).

Fund credit quality ratings capture a fund's overall exposure to default risk and are based in part on an assessment of a fund's current credit exposure based on a credit matrix scoring approach derived from Standard & Poor's historical default and ratings transition rates, and on the manager's credit management process.

### Fund Volatility Ratings

Volatility ratings offer our current opinion of a fund's sensitivity to changing market conditions. Volatility ratings range from 'S1' (lowest volatility) to 'S6' (highest volatility), and are based on an analysis of a fund's investment strategy and portfolio level risk, including interest-rate risk, credit quality, liquidity, concentration, call and option risk, and currency risk. The effects of various portfolio strategies, such as the use of leverage, hedging, and derivative instruments, are also factored into the rating. We also evaluate a fund's historical return volatility against government benchmarks. A fund volatility rating is a current opinion of a fixed-income fund's sensitivity to changing market conditions

relative to the risk of a portfolio composed of government securities and denominated in the base currency of the fund.

### Fund Ratings Process

The following is a step-by-step guide to how the Standard & Poor's fund rating process works.

#### The rating request.

All ratings are issued on a request basis. When an organization requests a fund rating, a Standard & Poor's fund rating analyst is assigned to lead the rating team, which is composed of a lead analyst, back-up analyst, and surveillance analyst, and he or she schedules a meeting with management. Fund management provides pertinent information for the ratings analysis, including, but not limited to the fund's prospectus, statement of additional information, approved list of investments, historical net asset values, historical weighted average maturity/duration, asset size history, shareholder information, a current portfolio holdings report, an organizational chart of senior fund officials, and biographies of key fund personnel.

(For more information on the items required on a new rating, please refer to the Fund Ratings Criteria Book articles on Principal Stability Fund Ratings and Fund Credit Quality and Volatility Ratings, published on RatingsDirect.)

#### The management meeting.

After receiving the initial rating request, the analysts meet with senior fund management officials generally at their offices to evaluate the effectiveness of fund management in implementing a portfolio strategy that is consistent with its stated investment goals. The meeting is focused on the history of the fund, investment objectives and strategy, management's investment philosophy, depth and stability of the fund management team, credit risk management, maturity/duration profile, pricing policy, risk preferences including use of leverage, operating policies, internal controls including oversight of fund management, and disaster recovery.

(For more information on the suggested agenda of a management meeting, please refer to the Fund Ratings Criteria Book articles on Principal Stability Fund Ratings and Fund Credit Quality and Volatility Ratings, published on RatingsDirect.)

#### Standard & Poor's review and analysis.

Once we have held the management meeting, the lead analyst reviews and analyzes the information obtained and presents the fund to a rating committee. The initial review process usually takes a few weeks.

#### The rating committee meeting.

A Standard & Poor's rating committee is composed of senior fund rating analysts, including the primary analyst, who votes on the fund's rating(s).

#### The call to the organization.

Following the rating committee, the lead analyst communicates the rating committee outcome to the company.

#### The appeal period.

After Standard & Poor's has announced the committee's decision to the organization, the organization has a brief time in which it may appeal the rating—but only if it can offer substantive, material information not previously available to the committee. The committee's final decision is then announced to the organization. Ratings are released publicly unless the fund company has chosen to keep the initial rating confidential.

#### The press release.

Standard & Poor's will release the rating, unless the fund company has chosen to keep the initial rating confidential.

A press release is sent to the media, announcing the fund's rating and the rationale for the rating.

#### Ongoing surveillance and annual reviews.

A condition for maintaining the rating is the submission of timely surveillance reports that include portfolio holdings and a completed surveillance summary worksheet. We maintain

surveillance on all funds we rate—weekly for principal stability fund ratings and monthly for fund credit and volatility ratings. If there is a specific event that Standard & Poor's perceives might have an effect on the rating, we review it immediately. Fund analysts maintain frequent contact with the portfolio management team throughout the year. We conduct annual, generally on-site fund management review meetings for all rated funds. Fund Profile rating reports are updated at least twice a year.

(For more information on required surveillance information, please refer to the Fund Ratings Criteria Book articles on Principal Stability Fund Ratings and Fund Credit Quality and Volatility Ratings, published on RatingsDirect.)

## Conclusion

This article is intended to outline Standard & Poor's Fund Rating Process. Full documentation of the criteria used to assign principal stability, credit quality, and fund volatility ratings can be found at [standardandpoors.com](http://standardandpoors.com).

When conducting our analysis, we judge each fund and its management on its own merits as there are no “model” funds. The important issue is how the fund is managed. Policies and strategies may differ from fund to fund, but the degree to which management has control over them should not. We closely examine the daily operations of the fund, including organizational structure and depth, the degree of oversight and accountability, particularly in the portfolio and risk management areas. It should be stressed that lower ratings within the investment-grade rating categories (down to ‘BBBm’ and ‘BBBf’) do not indicate that there is something “wrong” with a fund, but simply that the fund's strategy incorporates a slightly higher degree of risk.

Ratings definitions, ratings criteria, and related news and articles, as well as contacts and contact information related to Standard & Poor's fund ratings can be found at [www.standardandpoors.com](http://www.standardandpoors.com). ■

# Credit Quality

**W**hen evaluating a fund's credit quality, Standard & Poor's Ratings Services examines the risks associated with the quality, type, and diversification of the securities in each fund's underlying portfolio. The credit quality assessment for each instrument is generally based on the credit rating we have assigned to the security. The minimum credit quality standards for each fund are based on the fund's desired rating and maturity structure of its portfolio.

For funds rated 'AAAm', all securities should either carry a Standard & Poor's short-term rating of 'A-1+' or 'A-1' or be deemed to be of equivalent credit quality by Standard & Poor's. A minimum of 50% of the portfolio should be composed of 'A-1+' rated instruments or those we deem equivalent in credit quality. 'AAm', 'Am', and 'BBBm' ratings criteria allow for holdings in 'A-2' quality securities with overnight maturities and provide for increased percentages of 'A-1' exposure. The percentages reflect acceptable levels of credit risk for the different fund rating categories and are based on our historical default and ratings transition rates for short-term debt securities. Additionally, securities rated 'A-1' or equivalent by Standard & Poor's that are on CreditWatch with negative implications should be limited to maturities of 30 days or less. Investments rated 'A-1' and maturing in seven days or less can be counted toward the 'A-1+' percentage minimums, as historical default rates of 'A-1'

paper maturing in less than one week are similar to the default rates of 'A-1+' issuers.

### **Principal Stability Fund Ratings Definitions And Criteria Summary Table**

A principal stability rating (also known as a money market fund rating) is not directly comparable with a bond rating due to differences in investment characteristics, rating criteria, and creditworthiness of portfolio investments. For example, a money market fund portfolio provides greater liquidity, price stability, and diversification than a long-term bond, but not necessarily the credit quality that would be indicated by the corresponding bond rating. Ratings are not commentaries on yield levels. A principal stability rating is not a recommendation to buy, sell, or hold the shares of a fund. Furthermore, the rating may be changed, suspended, or withdrawn as a result of changes in or unavailability of information related to the fund.

Credit quality criteria are based on the results of our internal study on the stability of short-term ratings. Using a combined analysis of the yield spread movements resulting from changes in the underlying credit quality of principal stability instruments and the data derived from our historical ratings performance study, we have developed credit quality investment guidelines for rated funds to maintain a consistent level of credit risk within each fund rating category.

Standard & Poor's Global Fixed Income Research team released its first short-term default study on March 27, 2006. The Funds Ratings Group utilized this data to reassess the current 'A-1+', 'A-1', and 'A-2' composition rules, maintained by Money Market Funds that we rate. Drawing on the average two-month transition tables with data through the end of 2005, the Funds Rating Group conducted multiple analyses of historical defaults and downgrades.

Stress tests were run to assess whether it would be prudent to reallocate the percentages for the 'AAAm' rating. Drawing from tables 1 and 2 below, if 100% of the securities are allocated to the 'A-1' rating, the risk of a downgrade in the U.S. increases by 80% (to 1.222% from 0.680%) and the risk of default in the U.S. increases by 63% (to 0.010% from 0.006%). Similarly, the risk significantly increases in the Global and European Union regions. Such shifts in the

downgrades and defaults, in our opinion, do not necessitate changing the current allocation of a 50% 'A-1+', 50% 'A-1' credit breakdown. Furthermore, these criteria have been in place for about eight years now, including a period of above-average downgrades and defaults, representing a solid test period.

The Funds Rating Group will maintain the credit quality guidelines for the money market ratings categories as they currently stand. The current asset allocation guidelines are as follows:

For 'AAAm' ratings, 50% minimum in 'A-1+' (or equivalent) rated investments, with the remaining balance in 'A-1' (or equivalent) rated investments. Investments rated 'A-1' maturing in seven days or less are grouped with 'A-1+' rated investments.

For 'AAm' ratings, no less than 20% in 'A-1+' rated investments, with the remaining balance in 'A-1' rated investments. Provided the portfolio has the required 20% in 'A-1+' investments, up to 5% of the portfolio can be invested in 'A-2' rated investments maturing overnight.

For 'Am' ratings, funds can be fully invested in 'A-1' investments and up to 10% of the portfolio can be placed in 'A-2' investments maturing overnight.

In most cases, diversification guidelines are similar to those mandated by regulation and apply to both taxable and tax-exempt money funds. (For example: Rule 2a-7 of the

**Table 1 Downgrade Summary**

Money fund rating (%)	A-1+	A-1	A-2	Global	United States	European Union (15)
AAAm	50	50	0	0.717	0.680	0.788
AAm	20	80	0	1.080	1.005	1.221
Am	0	100	0	1.322	1.222	1.509

Source: Standard & Poor's Funds Rating Group Research.

**Table 2 Default Summary**

Money fund rating (%)	A-1+	A-1	A-2	Global	United States	European Union (15)
AAAm	50	50	0	0.004	0.006	0.000
AAm	20	80	0	0.006	0.009	0.000
Am	0	100	0	0.007	0.010	0.000

Source: Standard & Poor's Funds Rating Group Research.

Investment Company Act of 1940 is the primary section of regulation that governs U.S. domestic money funds.) Generally, 5% diversification limits are in place for corporate, bank, and other money market securities with maturities beyond overnight, although U.S. government securities and certain other exceptions made for offshore/European funds are not subject to the 5% rule. (Please refer to “Principal Stability Fund Rating Criteria for Offshore and European Money Market Funds” on RatingsDirect.) Additionally, we have established specific credit quality standards and diversification criteria for repo providers and government agency issues, among other things. These criteria can be found in the relevant sections of the Funds Rating Criteria Book. (See Appendix: *Principal Stability Fund Ratings Definitions and Criteria Summary Table page 73*)

### Regulation Versus Ratings

In 1983, Rule 2a-7 of the U.S. Investment Company Act of 1940 had been formally amended several times, and there have been numerous interpretive releases and exemptive orders with regard to 2a-7 rules issued by the SEC during the past few decades. Rule 2a-7 was established to limit risks money market funds can take in an effort to provide investors safety of principal and liquidity.

Standard & Poor’s principal stability ratings assigned to money market funds address a money fund’s ability to maintain principal stability and to limit exposure to principal losses, but there are significant differences between the minimum standards required by Rule 2a-7 and ratings criteria for the highest rating categories set by Standard & Poor’s. In fact, a fund that meets the minimum regulatory requirements would at best qualify for a ‘BBBm’ rating from Standard & Poor’s. The ultimate rating could be even lower depending on the fund’s cash flow patterns and liquidity management, management experience and controls, investments and parameters, and current marked-to-market net asset value (NAV) policies.

Our ratings criteria and approach differ from Rule 2a-7 guidelines in regard to a fund’s weighted average maturity, credit

quality, eligible floating rate securities, defined limited liquidity securities, and repurchase agreements (repos). Rule 2a-7 allows for a maximum of 90 days weighted average portfolio maturity (WAM). There is a common misconception that this is a blanket endorsement for a 90-day WAM; however, this is not the case. The rule states that a fund’s WAM should be at an appropriate level to maintain a stable NAV, but should never exceed 90 days. This implies that funds with less liquid assets, a concentrated shareholder base, or containing interest rate-sensitive securities should seek to control interest rate sensitivity and maintain higher levels of liquid assets to therefore keep lower WAM levels.

The highest rating that a money market fund having a 90-day WAM can get from Standard & Poor’s is ‘Am’. Our analysis of a money market fund’s interest rate sensitivity shows that a fund with a 90-day WAM could break the dollar as a result of an instantaneous interest rate rise of 205 basis points, without considering account shareholder subscriptions or redemptions. Higher rating categories require lower-weighted average maturities with ‘AAAm’ guidelines set at a maximum of 60 days.

Rule 2a-7 delineates minimum credit quality standards for money market funds. A taxable money fund must have at least 95% of its assets invested in first-tier securities. A first-tier security is defined as being in the highest rating category of at least two nationally recognized statistical rating organizations (NRSROs) or deemed equivalent by the fund’s adviser. The remaining 5% may be in second-tier securities (rated in the second-highest rating category by two NRSROs or deemed equivalent by the fund’s adviser). First-tier securities (excluding government securities) are limited to a 5% issuer diversification maximum. Issuer concentrations are limited to 1% for second-tier securities. Other exceptions are made for tax-exempt money market funds.

Our criteria for ‘BBBm’ ratings are more in line with Rule 2a-7 minimum standards. Higher rating categories require a higher percentage of ‘A-1+’ rated securities, while lower-quality or second-tier securities are

eligible for ratings below 'AAA-m' if the securities mature in one day. The SEC recognizes Standard & Poor's 'A-1' short-term rating category as first-tier. Standard & Poor's, however, uses a plus (+) symbol to indicate relative strength within the 'A-1' category. Criteria for all ratings outline minimum acceptable percentages of Standard & Poor's rated securities. Rule 2a-7 does not distinguish between 'A-1' and 'A-1+' ratings.

According to Rule 2a-7, the credit quality of a repo is determined by that of the securities underlying the agreement, provided that the collateral qualifies for preferential treatment under the Federal Deposit Insurance Act or the Federal Bankruptcy Code. Since repos typically involve government securities, no diversification requirements apply. Our rating criteria look to the creditworthiness of the repo counterparty. Eligible repo providers include 'A-1+' or 'A-1' rated providers, or those deemed to be of equivalent credit quality.

### Master-Feeder Funds

Standard & Poor's evaluates master-feeder funds, which are sometimes referred to as Hub and Spoke® (a patented term marketed by Signature Financial Group Inc.), much in the same way it evaluates other rated funds.

Master-feeder structures were created for fund sponsors and managers to capture the efficiencies of larger portfolios of assets, while providing a product to smaller fund clients. In the master-feeder structure, the feeder fund conducts essentially all of its investing through the master fund. Feeder funds have matching investment objectives, and assets of each feeder fund are held in the master fund. This allows each feeder fund to be sold separately with separate fee structures to individual target markets, allowing them to benefit from economies of scale of funds invested in the larger master fund.

When evaluating master-feeder funds, we assign ratings to the master portfolio, since the master holds underlying securities of the feeder fund. We will also assign fund ratings to individual feeder funds that are part of the master fund structure when requested by the fund sponsor. As with all principal stability fund ratings assigned by Standard & Poor's, master-feeder funds are subject to an evaluation of the creditworthiness of a fund's investments and counterparties, the market price exposure of its investments, sufficiency of the fund's portfolio liquidity, and management's ability and the controls it establishes to maintain the fund's stable NAV by limiting exposure to loss. ■

# Management

Understanding the strengths and weaknesses of fund management is essential to any analysis of a managed portfolio rating. The ratings process for principal stability or money market funds includes a meeting between fund officials and Standard & Poor's credit rating analysts to review fund investment objectives, portfolio management techniques, and risk aversion strategies. When assessing a fund for a rating, our team evaluates the effectiveness of fund management in implementing a dynamic investment process consistent with the fund's stated goals and objectives.

We believe that these meetings are instrumental in providing an appropriate fund rating service. A management assessment considers the following aspects of portfolio management: experience and track record in portfolio management, operating policies and risk preferences, credibility and commitment to policies, and the extent and thoroughness of internal controls and commitment to oversight. We judge each fund management team on its own merits. The meeting focuses on the way the fund is managed in relation to its shareholder base and stated investment objectives. We closely examine the daily operations of the fund, including organizational structures, breadth and depth of staff, and adequacy and level of investment controls. The following sections describe the key considerations in our analysis of fund management.

## Experience

Because money market funds only allow for a 0.5% margin of error, they require skilled financial professionals to manage them. An experienced fund manager with a proven track record in money market funds greatly enhances a fund's safety. This manager does not necessarily have to make every investment decision, but should be closely involved in fund oversight. Under strict guidelines, it may be acceptable for less experienced personnel to execute trades and make certain investment decisions. Nevertheless, an experienced money market fund manager should monitor all trading and investment activities daily.

It is also necessary to distinguish between an experienced money market fund manager and someone who has experience managing long-term investments. Managing a stable net

asset value (NAV) fund is very different from managing a fund with a variable share price. Investment policies and strategies that may be prudent for funds with fluctuating NAVs can be disastrous for money market funds. The precision necessary to run a successful money market fund takes a different mindset than one that is required for managing other fixed-income vehicles. An experienced fixed-income manager does not necessarily make an effective money market fund manager. Therefore, we emphasize an individual's level of experience managing stable NAV funds. A lack of experience can result in no rating, a lower rating, or could possibly necessitate more stringent controls such as operating at a shorter weighted average maturity (WAM).

### Operating Procedures And Risk Preferences

We evaluate the fund manager's operating procedures specific to each fund requesting a principal stability rating. A key component of this review is the investment decision-making process. Numerous investment decisions are made daily for all money market funds. We examine how these decisions are made and who is responsible for executing them.

Fund advisers who conduct frequent investment committee meetings to arrive at both short-term and intermediate-term investment strategies are viewed more favorably than those who leave investment strategy decisions strictly up to the fund manager. This helps prevent any one individual from having an inordinate amount of influence on the strategy of a fund. A key role of an investment committee is to set investment guidelines and strategies. The portfolio managers then have the job of executing these strategies using their expertise in managing money market funds.

We also focus on the amount, type, and quality of information used in making policy and investment decisions. This includes the size and capabilities of the credit and risk research staff, the access to current economic data and analysis, and the types of on-line business information services used. All fund prospectuses contain investment policies that fund advisers must follow. These policies tend to be quite general, typically mimicking

regulation, and thereby giving fund managers considerable investment leeway. It is prudent for fund advisers to establish written internal procedures to clearly define both the fund's investment guidelines and the manager's operating policies.

Funds also benefit from having clear and explicit investment policies regarding the use of variable-rate notes, structured notes, and derivative instruments and other securities that are difficult to liquidate. Fund investment policies should incorporate procedures on the approval, risk measurement, control, and limits related to these less liquid securities. Fund managers should be able to present an analytical basis for determining whether such securities are eligible for the fund, and that these investments will remain at or be re-priced to their amortized cost value at each reset until maturity. This analytical basis should include a review of historical index behavior and sensitivity analysis.

Policymaking responsibilities for any mutual fund ultimately lie with its board of directors or trustees. The board is elected by fund shareholders to oversee their investments and fund management. Boards entrust investment advisers to handle the funds' daily affairs, but should not rely on the advisers to always act in the best interest of the shareholders. The contracts that boards establish with investment advisors for management of the fund are based on a percentage of fund assets. Therefore, it is beneficial for advisers to attract money into their funds. Historically, high returns have been a way to attract more assets. Nevertheless, higher returns are also associated with greater risks. Boards must establish investment policies that are strict enough to prevent fund advisers from taking risks that are not in the best interest of the shareholders. They must also establish stringent procedures for reviewing and enforcing these policies.

Board members are not necessarily investment professionals and may lack expertise in money market fund management. Still, a board should act as an independent body, and demand that advisers be able to clearly explain all investments and investment strategies. We feel that boards should receive detailed reports regarding fund investments

and activities at least on a monthly basis. Boards should be aware of fund activities throughout the year, not just at quarterly meetings. All too often, boards are passive or lack the independence necessary to effectively do their jobs. This leads to rubber-stamp approval of investment adviser activities. Such boards are not fulfilling their responsibility to fund shareholders.

Investing, by definition, is risk-taking. Investment advisers are paid to take risks commensurate with the desires of fund shareholders. It is impossible to eliminate risk in money market funds and still provide adequate returns on investments. Even the most conservatively managed fund can be in jeopardy of breaking the dollar if there are sufficiently adverse market conditions. Fund managers differ in their risk preferences, as they should. Conservative and aggressive investment strategies can be effective, provided that the proper operating procedures are in place to ensure that these strategies are consistent with prudently established guidelines.

### Internal Controls

Money market funds universally have the investment objective of maintaining a constant or accumulating NAV per share. We consider strong internal controls of fund advisers a key determinant in rating a fund. Included below are commentaries on pricing policies, NAV deviation procedures, depth-of-staff analysis, stress-testing capabilities, asset-flow monitoring, trade ticket verification, systems backup requirements, levels of oversight, and disaster recovery.

#### Pricing policies and NAV deviation procedures

Accurate pricing is a key factor in maintaining a stable NAV. We expect all investment advisers to be capable of accurately pricing portfolio securities, as well as periodically calculating a fund's actual NAV in-house. Not only must investment advisers be able to calculate NAV, but they also need to have explicit written plans for dealing with any material deviation. Investment advisers and the fund's board are responsible for establishing NAV deviation procedures. Regulation dictates that action must be contemplated if a fund's NAV

deviates by more than 0.5% from \$1.00. Our principal stability fund ratings specifically address the likelihood of this deviation occurring. Therefore, we expect rated funds to have written policies that initiate action long before the point of deviation. At a minimum, these policies should dictate action at a 0.25% deviation. In this case, fund managers should be required to meet with senior fund officials, notify board members, and establish a formal action plan. All portfolio managers should be highly familiar with these NAV deviation procedures and should not rely on a third-party administrator for implementation. Since it is in the best interest of the adviser to be proactive in dealing with NAV deviations, we request fund advisers price the portfolio and calculate NAV daily (marked to market) when deviations reach the following for each specific rating category: 'AAAm' 0.15% (.9985/1.0015), 'AAm' 0.20% (.9980/1.0020), 'Am' 0.25% (.9975/1.0025), and 'BBBm' 0.30% (.9970/1.0030).

#### Depth and adequacy of staff training

It is also important that fund controls are maintained when the primary portfolio manager is not managing the fund, as substitute managers may not have the same level of investment experience as the primary manager. Nevertheless, it is inexcusable to lack the necessary controls for preventing mistakes when the primary manager is unavailable. Each member of the investment adviser's staff, with the authority to manage the fund on a temporary basis, should be adequately trained in the investment policies and guidelines for those funds. In addition, a set of procedures should be in place to automatically review the work of a substitute portfolio manager for each day that the substitute manager oversees the fund(s).

#### Stress-testing capabilities

Fund managers should also be reasonably prepared to handle the unexpected. This entails the ability to perform "what if" and stress-test analyses. A fund manager should be able to calculate the impact of the purchase of any security on the fund's WAM. This calculation should reflect the influence of sudden or unexpected redemption occurring

in conjunction with the security purchase. In addition, fund managers should have the ability to stress-test both individual securities and entire portfolios. Tests for individual securities should estimate price sensitivity under severe interest rate movements. Portfolio testing should stress the fund's assets in aggregate under the same interest rate scenarios, but should also measure the impact of dilution on NAV, assuming sizable redemption activity. The magnitude of the potential redemption activity used in testing should consider historical redemptions and the nature of the shareholder base. Funds with interest rate-sensitive, institutional investors need to stress-test redemptions at much higher levels than funds with typically more stable retail investors.

#### Asset-flow monitoring

Redemption volatility adds to the difficulty of managing a money market fund. Immediate liquidity is a key element in the growth and popularity of money market funds. Investors like having quick access to their money. Yet, the uncertainty created by instant liquidity can make it difficult to employ a consistent investment strategy. Funds with very volatile shareholder accounts are subject to the greatest risk. It is nearly impossible to accurately predict cash inflows and outflows, but fund managers can take steps to prepare for them. Some of these steps include constant communication with a fund's largest shareholders to get indications of redemptions. It will also help fund managers remain informed of how long large deposits are expected to stay in the fund, so managers can invest accordingly. Some funds have policies that encourage prior notification of large withdrawals. Other funds will refuse "hot money," which is money from investors who will subscribe in and out of the fund based on interest rate movements. Hot money tends to leave a fund quickly in rising interest rate environments, causing dilution to NAV and potentially harming the remaining shareholders. Fund managers should be very familiar with the redemption patterns of their largest investors. This facilitates the management of cash flow volatility, thus enhancing fund safety.

#### Trade ticket verification

Proper controls also entail trade ticket verification. All trade tickets should require two signatures, one belonging to the individual executing the trade, and the other to a portfolio manager or senior level member of the investment advisory staff. In addition, it is beneficial to have a computer system tailored to regulate the investment parameters of each fund. In such a portfolio management system, unauthorized investments would be rejected, immediately alerting portfolio managers to the mistake. These systems can also do the same for purchases that cause a fund's WAM to exceed established limits. In addition, we view pretrade compliance modules favorably, whether they are in-house or off-the-shelf systems. These systems prohibit portfolio managers from exceeding trade limits prior to making any purchases, significantly reducing the risk of trading errors.

#### Disaster recovery

Computer systems are vital to managing mutual funds. In our review of a fund's controls, all backup computer capabilities are examined. System failure should never shut down a mutual fund, as shareholders expect access to their money. All computer processes for a fund should be replicated on another system, usually with a custodian or administrator. Fund advisers should backup data nightly to an offsite location. It is also important to have detailed contingency management and disaster recovery plans that are tested periodically. Earthquakes in Los Angeles and San Francisco, floods in Houston, and hurricanes hitting Florida are just a few past examples of situations in which emergency action plans had to be executed.

#### SEC Post-Examination Letters

All rated funds that are registered under Rule 2a-7 of the Investment Company Act of 1940 must submit a copy of the latest SEC post-examination letter and the investment adviser's response to our company. If no letter has been received, fund counsel must provide representation indicating no letter was received from the SEC. As part of our monitoring

of money fund ratings, we request such information annually. SEC letters are requested even if the letter addresses other money funds managed by the same adviser and not the rated fund specifically. We rate money market funds based on representations from fund advisers and do not perform an audit. When an audit is performed, as in the case of the SEC examination, we believe that the outcome of the audit can provide important insight into the daily operations of the adviser, which may ultimately affect fund safety.

### Fund Governance

Since news of fund-industry trading scandals emerged in Sept. 2003, the SEC has sued more than a dozen of the 25 largest mutual fund complexes, and proposed a variety of

rules to clean up abuses such as late trading and market timing, or the rapid buying and selling of fund shares that can lower performance at the expense of long-term fund investors. Some of the SEC's proposed reforms include mandating a redemption fee on short-term trading in mutual funds, and amending Rule 12b-1 to prohibit mutual funds from paying for distribution of their fund shares with brokerage commissions. This would impose a mandatory fee on short-term transactions; necessitate disclosure (in dollar terms) of fees and expenses that shareholders pay; and require 75% of fund directors, including the chairman, to be independent of the fund management company. The NASD formed a task force to look at certain fund issues including directed brokerage and soft dollar arrangements,

### Information Needed For A Principal Stability Fund Rating

- Letter requesting our rating;
- The most recent prospectus, statement of additional information, and any marketing materials;
- A copy of the most recent annual report;
- A copy of the fund's investment policy, including policies concerning asset eligibility, selection, and evaluation process;
- Policies regarding repurchase agreements, including a copy of the master repurchase agreement(s) and legal representations;
- Policies concerning use of forward commitment contracts to buy and sell securities;
- Policies on leveraging portfolio assets;
- Frequency and method of securities pricing, reporting, risk controls, and oversight process;
- Historical variation between marked-to-market pricing and amortized cost evaluation in terms of share price, monthly, for the past three years (or since the fund's inception if less than three years old);
- Explanation of any material deviation in the share price from \$1.00 during the past three years;
- Range of weighted average portfolio maturities for each month during the past three years;
- Redemption history on a monthly basis for the past three years, reflecting gross purchases and gross redemptions;
- Proposed/current mix of shareholders (e.g., retail, institutional), and percentage of fund shares held by largest 10 shareholders;
- Current asset size or proposed asset size;
- Current list of portfolio holdings or for new funds, a hypothetical portfolio with security descriptions, ratings, CUSIPs, and prices;
- List of securities approved for purchase according to asset type, credit quality, maturity, and sector;
- Level of insurance coverage (Fidelity Bond, Error and Omission, Director and Officer);
- A copy of the most recent SEC post-examination letter and fund advisers' response letter;
- Biographies and organizational chart of key fund employees; and
- Background materials on sponsor, company structure, and related companies.

revenue sharing, and 12b-1 fees, which funds may charge investors to recoup marketing

costs. The NASD does not regulate mutual funds, but oversees brokers who sell them.

## Suggested Agenda For Principal Stability Fund Rating Management Meeting

### Overview

1. Brief history of the fund
  - Primary constituency
  - Growth patterns
  - Fund performance for the past three years (if applicable)
2. Basic philosophy
  - Investment and marketing strategy
  - Operating controls
3. Organization
  - Staff size and function
  - Role of board of directors and sponsors
  - Primary functions of key officers

### Credit risk

1. Credit quality of eligible investments
  - How approved list of eligible investments is determined;
  - What the approved list includes;
  - When and by whom approved list can be modified;
  - Comparison of eligible and actual investments;
  - Criteria for creditworthiness;
  - Credit evaluation system; and
  - Degree of reliance on our credit ratings.
2. The effect of the public rating on eligibility for investment
3. Policies on repos
  - Eligible sellers/repurchasers
  - Underlying securities
  - Degree of overcollateralization
  - Perfection of first priority security interest
4. Diversification/concentration
  - Investment mix allowances by type
  - Investment mix allowances by credit quality

- Maximum individual holdings by issuer, affiliates, and credit support provider

### Market price risk

1. Maturity
  - General posture on weighted average portfolio maturity and maturity distribution;
  - Basis for extending or shortening weighted average portfolio maturity; and
  - Historical maximums and averages of portfolio maturity.
2. Liquidity
  - Posture on portfolio mix
  - Portfolio mix and its change with market conditions
  - Policy regarding illiquid securities
  - Put agreements (if any)
  - Other secondary market considerations
3. Redemption experience
  - Recent experience and assumptions relating to maturity structure, if any
  - Receipts versus redemptions
  - Largest weekly redemptions
  - Recent changes in general operations, if any
  - Shareholder base and account characteristics

### Pricing policy

1. Accounting method
  - System and its use
2. Frequency of marking portfolio to market
3. Triggers for management action and actual examples

### Operating scenarios

1. Use of securities lending and forward commitment transactions, and accompanying risk management policies

2. Circumstances under which a fund would extend average maturity beyond normal guidelines or alter credit quality

3. Trends in interest rate changes and tolerance of fund assets.

### Controls

1. Daily modus operandi with respect to investments
  - Procedures for assuring timely purchases and redemptions of shares and timely liquidation of investments;
  - Computer applications, adequacy of computer facilities, and computer backup provisions; and
  - Fidelity bond coverage, errors and omissions insurance, and other liability protection
2. History of any previous back-office problems
3. Time needed to meet shareholder redemption requests
4. Methods of monitoring investments and approved list
5. Disaster recovery procedures

### Fund governance

1. What compliance procedures are in place for the fund and fund management?
2. How often are they reviewed and updated?
3. Is there a defined risk management process in place to ensure funds are managed within their objectives and established risk parameters?

When rating funds for principal stability, we consider strong fund governance essential to managing a rated fund. When analyzing fund management, our fund ratings personnel question fund management in areas such as compliance, investment oversight, and risk management strategies. A sample of the questions considered includes the following:

- Is there a compliance manual available?
- How often are compliance policies reviewed and updated?
- Who does the Compliance Officer report to in the organization? Is the Compliance Department separate from portfolio management, sales, and marketing?
- What policies are in place for investments or trading by internal investment managers and the analytical staff, and how are they monitored?
- Are written policies and procedures communicated to staff and signed annually (i.e., a Code of Ethics)?
- How does senior management (the CEO and Chief Investment Officer) provide for an appropriate culture to ensure that compliance is viewed as a priority and enforceable?
- Is there a defined risk management process in place to ensure that funds are managed within their objectives and established risk parameters?
- Is there fund portfolio and trading oversight by compliance personnel?
- How are large investments in funds monitored and how much clarity is there on omnibus accounts? ■

### Weekly Information Needed To Monitor A Principal Stability Fund Rating

1. Complete Portfolio Surveillance Information Sheet (see attached sample coversheet)
2. Portfolio Holdings Report  
For each security provide:
  - Par value
  - Current market value
  - CUSIP number
  - Full description of investment including issuer, interest rate, and maturity date
  - Type of investment
  - Insurer or LOC provider, if applicable
  - Percent of portfolio
  - Standard & Poor's rating
  - Terms of floating-rate notes (reset formulas and frequencies)
  - Identification of non-traditional repo, funding agreements, credit-linked notes, extendible notes, and other esoteric securities
3. Other Portfolio Activities  
Please provide information on all transactions related to the fund such as:
  - Repos (include counterparty, underlying collateral, and terms);
  - Reverse repos (include counterparty, underlying collateral, and terms);
  - Dollar rolls;
  - Futures (list trading exchange); and
  - Securities lending program (include list of securities lent out as part of program).
4. Fund changes or news  
Any additional information related to the fund's operation should be forwarded such as:
  - Changes to the investment management team;
  - Changes in investment policies or operating procedures;
  - Current prospectus and statement of additional information;
  - Notification of changes to prospectus or statement of additional information;
  - Notification of fund name change or mergers;
  - Notification of changes in board of directors, senior management, investment adviser, or custodian;
  - Annual and semiannual reports; and
  - All press releases relevant to the fund.

55 Water St., 33rd Floor, Fund Services—Surveillance  
New York, New York 10041  
General Telephone: 212-438-5073, Fax: 212-438-5075

**Surveillance Requirements for Principal Stability Fund Ratings  
(Money Market Ratings)**

S&P Surveillance  
Analyst: Name Telephone 212-438-XXXX  
Email: [first\\_last@standardandpoors.com](mailto:first_last@standardandpoors.com)  
Name of Fund: Some Fund  
Portfolio Date: 1/31/2007

Contact Information	
Name:	<input type="text" value="Some"/> <input type="text" value="Person"/>
Company:	<input type="text" value="Some Company"/>
Tel:	<input type="text" value="555-555-5555"/>
Email:	<input type="text" value="someperson@someemail.com"/>

Please Attach Portfolio Holdings Information

Weighted Average Maturity (WAM) (for each day of the week)					
Date:	1/31/2007	1/30/2007	1/29/2007	1/28/2007	1/27/2007
WAM:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Please enter dash (-), if WAM is not applicable and provide comments at the end of the form.

Fund Summary	
7 day Yield (at least 2 decimal places):	<input type="text" value="0.00"/>
30 day Yield (at least 2 decimal places):	<input type="text" value="0.00"/>
Total Amount of Shares Outstanding:	<input type="text" value="50,000,000"/>
Net Assets (US\$, in millions):	<input type="text" value="50.0"/>
Gross Assets (US\$, in millions):	<input type="text" value="50.0"/>
Greatest Net Redemption for the Week (US\$, in millions):	<input type="text" value="0.00"/>
Net Asset Value (per share) (at least 5 decimal places):	<input type="text" value="1.000000"/>

Security Types (%)	
Agency Fixed Rate	<input type="text"/>
Agency Floating Rate	<input type="text"/>
Certificate of Deposit	<input type="text"/>
Commercial Paper	<input type="text"/>
Corporate Fixed Rate	<input type="text"/>
Corporate Floating Rate	<input type="text"/>
Master Note	<input type="text"/>
Repurchase Agreement	<input type="text"/>
Time Deposit	<input type="text"/>
US Treasury Bill	<input type="text"/>
US Treasury Note	<input type="text"/>
<b>Update Total</b>	<input type="text" value="0.00"/>
<b>Add Security</b>	<input type="text"/>

S&P Ratings (% of Gross Assets)	
A-1+ Short-Term Rating	<input type="text" value="100.00"/>
A-1 Short-Term Rating	<input type="text"/>
<b>Update Total</b>	<input type="text" value="100.00"/>
<b>Add Rating</b>	<input type="text"/>

Derivatives/Leveraged Positions (% Net Assets)	
Please provide a separate list of the above transaction including amount, counterparty and exchange.	
Futures	<input type="text"/>
Reverse Repo	<input type="text"/>
Securities Lending	<input type="text"/>
Uncovered Dollar Rolls	<input type="text"/>

Maturity Distribution (% of Gross Assets)	
1 Day	<input type="text"/>
2 to 7 Days	<input type="text" value="0.00"/>
8 to 30 Days	<input type="text" value="0.00"/>
31 to 90 Days	<input type="text" value="0.00"/>
91 to 180 Days	<input type="text" value="0.00"/>
181+ Days	<input type="text"/>
<b>Update Total</b>	<input type="text" value="0.00"/>
<b>Add Maturity</b>	<input type="text"/>

Illiquid/Limited Liquidity Exposure (%)	
Please include illiquid/limited liquidity securities on the portfolio holdings report attached	
Any of the following that do not possess unconditional puts within 7 days	
Extendible Notes (Issuer Option)	<input type="text"/>
ABCP Backed by CDOs with Remarketing Put	<input type="text"/>
CDO Money Market Tranches > 7 Days	<input type="text"/>
CP of CDOs Without 100% Liquidity	<input type="text"/>
Collateralized Debt Obligation	<input type="text"/>
Credit Linked Notes	<input type="text"/>
Currency Swaps (Limited Liquidity)	<input type="text"/>
Extendible ABCP	<input type="text"/>
Funding Agreements Without 7 Day Puts	<input type="text"/>
Master/Promissory/Loan Participation Notes	<input type="text"/>
Reverse Extendibles	<input type="text"/>
Term Repo Greater Than 7 Days	<input type="text"/>

Government Agency Issuer (% of Gross Assets)	
Fannie Mae (FNMA)	<input type="text"/>
Federal Farm Credit Bank (FFCB)	<input type="text"/>
Federal Home Loan Bank (FHLB)	<input type="text"/>
Freddie Mae (FHLMC)	<input type="text"/>
Sallie Mae (SLMA)	<input type="text"/>

# Market Price Exposure

**B**y far, the most complex part of money market fund analysis is judging a fund's sensitivity to changing market conditions.

Absolute stability of net asset value (NAV) is a myth perpetuated by the amortized cost method of pricing securities. All fixed-income securities are subject to price fluctuations based on the following:

- Interest rate movements;
- Maturity;
- Liquidity;
- Credit risk or perceived credit risk; and
- The supply and demand for each type of security.

These factors are just as true for money market funds as for longer-term fixed-income mutual funds. The amortized cost method of pricing permits money fund investments to be priced by amortizing any discount or premium in the purchase price straight to its maturity. For example, the amortized cost price of a 90-day security with a par value of 100 that was purchased for 99.10 will increase in value by 0.01 each day until it matures, notwithstanding changing market conditions. The amortized cost method masks market risk by permitting funds to value securities as if no outside factors exist.

The theory behind allowing amortized cost pricing is that most instruments eligible for purchase by money market funds have minimal market volatility due to their short maturities and high credit quality. It is also cheaper and more efficient for funds to use this method than to get actual market prices on a daily basis. Money funds are required to calculate the market value of their assets periodically to deter-

mine if the fund's actual NAV per share deviates materially from \$1.00 and to take action if significant deviation exists. Deviations of greater than plus-or-minus 0.5% can create a situation in which a fund sells and redeems shares at a price other than \$1.00, or, in other words, "breaks the buck." Clearly, there is a very small margin for error. Recognizing this, Standard & Poor's Ratings Services has focused heavily on the potential deviation in market value (referred to as market price exposure) in establishing money market fund rating criteria. Variables analyzed for each fund rating include the following:

- Weighted average maturity (WAM);
- Liquidity;
- Index and spread risk;
- Diversification;
- Potential dilution of a fund's asset base; and
- Security and portfolio valuation methods.

Combined, these factors determine each fund's market price exposure.

## Weighted Average Maturity

Determination of market price exposure begins with an examination of a fund's

susceptibility to rising interest rates. The portfolio's WAM is a key determinant of the tolerance of a fund's investments to rising interest rates. In general, the longer the WAM, the more susceptible the fund is to rising interest rates. A fund comprised entirely of Treasury securities with a WAM of 45 days could withstand approximately twice the interest rate increase that a fund with a 90-day WAM could withstand, leaving all other factors aside.

We assess the sensitivity of the market value of the portfolio's assets to interest rate changes, with a lower sensitivity having a more favorable influence on the fund's rating. For the 'AAAM' rating category, our criteria call for a maximum WAM of 60 days. Nevertheless, some funds have distinct liquidity needs based on asset size, asset volatility, and shareholder profile, making it difficult for these funds to safely manage with a 60-day maximum WAM. Funds with less than \$100 million in assets and/or funds with a highly concentrated or highly volatile shareholder base may be limited to a shorter WAM, unless fund management can make a compelling case otherwise. We are often asked to rate small funds with limited operating history (start-up funds) that have a concentrated shareholder base, or a new shareholder base with uncertain liquidity needs. We consider the potential impact of a large redemption by one or more of the major shareholders to be a significant risk to a fund's ability to maintain a stable NAV. Consequently, until a fund has grown to \$100 million with a diversified and seasoned shareholder base, we will seek assurance that the fund manages to a shorter WAM with higher levels of liquidity. Higher WAMs are usually considered appropriate for funds in lower rating categories with the maximum WAM limits for 'AAm' and 'Am' rated funds set at 75 days and 90 days, respectively.

## Liquidity

Interest rate sensitivity is not the only factor that can affect the principal value of a money market fund's portfolio. Liquidity of a money fund's portfolio is critical to maintaining a stable NAV. The liquidity of a security refers

to the speed at which that security can be sold for approximately the price at which the fund has it valued or priced. Securities that are less liquid are subject to greater price variability. Certain securities may be liquid one day, yet illiquid the next day. In determining the rating on a fund, we consider each fund's liquidity needs and its ability to quickly sell portfolio holdings if the need arises to meet cash outflows or large redemptions.

The liquidity of portfolio investments is also of great importance in determining a fund's market price exposure, because the degree of liquidity can greatly affect the market value of investments and result in an erosion of a fund's NAV. When analyzing a fund's liquidity, we consider the following:

- Types of investments and their secondary market liquidity;
- Presence of securities with limited liquidity (e.g. those whose liquidity is dependent on the issuing entity or broker/dealer);
- The fund's level of cash or overnight securities including overnight repo; and
- The portfolio's concentrations by issuers and affiliates.

A fund with a higher proportion of relatively illiquid investments is more susceptible to a sizable decline in its portfolio market value than is one holding highly liquid investments.

The size and breadth of the primary and secondary market, and hence the demand for different types of securities, factors into the liquidity equation. Clearly, the greater the demand for an instrument, the more liquid it is. Nevertheless, some securities can be quite liquid when the issuer or that particular market is performing well. When markets turn (due to event risk), or when the market experiences a flight to quality due to actual or perceived higher market or credit risk, certain instruments can experience significant price movements, and liquidity can dry up rapidly, as was the case with the structured notes market in 1994 and for funding agreements in 1999.

Structured notes were designed to perform well and predictably during periods of stable or falling interest rates. The interest rate environment of 1993 made them popular and fairly liquid. The fact that these securities were issued by government agencies also

enhanced marketability and liquidity. When short rates began rising in 1994, the demand, and consequently the liquidity of these

instruments, dried up. The illiquid nature of these securities was exacerbated when regulators declared that such securities were clearly

### Protecting money market funds from interest rate swings

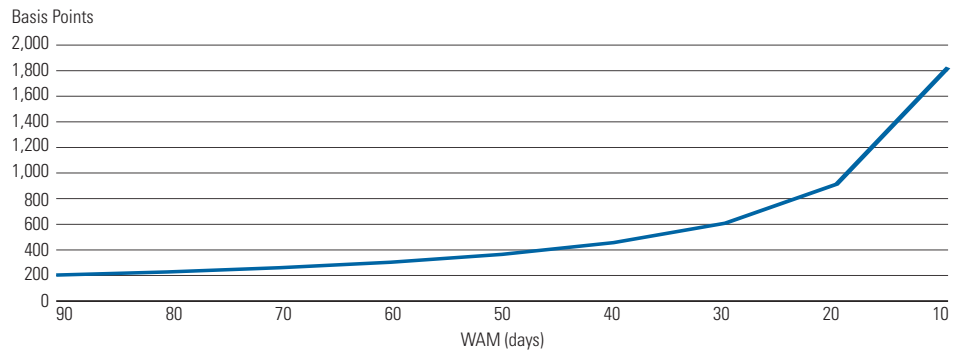
In accordance with Standard & Poor's Principal Stability criteria for rated money market funds, maximum WAM guidelines are engineered to assure minimal NAV fluctuation under most market conditions.

Table 1 NAV Fluctuation		—NAV—				
WAM (days)	0.999000	0.998000	0.997000	0.996000	0.995000	0.994900
—Basis point shift—						
90	41	81	122	162	203	207
80	46	91	137	183	228	233
70	52	104	156	209	261	266
60	61	122	183	243	304	310
50	73	146	219	292	365	372
40	91	183	274	365	456	465
30	122	243	365	487	608	620
20	183	365	548	730	913	931
10	365	730	1,095	1,460	1,825	1,862

The relationship between interest rate shifts and NAV volatility has led us to restrict 'AAAm' rated money market funds to a maximum WAM of 60 days. The chart below illustrates the inverse relationship between fund WAM and the minimum positive interest rate shift necessary to cause NAV to fall to a given level. Consider, for example, an elementary model fund that holds one Treasury bill and has a WAM of 90 days. In this case, an instantaneous upward shift of 203 basis points (bps) would need to occur before the NAV of the model fund would fall to 0.9950. If the same model fund had a WAM of 60 days, it could sustain a 304 bp interest rate shift before its NAV falls to 0.9950.

Chart 1

#### Minimum Interest Rate Necessary To Drop NAV to \$0.9950 From \$1.00



inappropriate investments for money market funds.

The liquidity of funding agreements was and is directly tied to the issuing entity because these securities are not actively traded on the secondary market. Funding agreements are usually issued with a “put feature” that provides the investor the ability to convert the investment back to cash upon notice to the issuing entity. Therefore, the investor is very dependent upon the issuing entity to provide liquidity for funding agreements. In 1999, an insurance company that had issued a sizable amount of funding agreements with short-term puts experienced a sudden and unexpected series of credit downgrades, resulting in a rush of holders to exercise their puts. When this issuer failed to meet its put obligations, holders of funding agreements were left holding “lower credit and illiquid securities,” presenting these funds with significant market value risk.

Liquidity is not always easy to measure. As noted, some securities may be very liquid in certain markets and very illiquid in others. Securities tend to be less liquid if they are:

- Not often traded;
- In short supply;
- Relatively new and innovative; or
- Highly structured.

Other factors influencing liquidity are the number of dealers making a market in the security, the complexity of the security, and the seasonal nature of supply and demand, particularly in the tax-exempt market.

### 10% Limited Liquidity/Illiquid Basket

Currently, both U.S. domestic money market funds and certain offshore money funds that abide by Rule 2a-7 can elect to classify and hold up to 10% of their assets in an illiquid basket. This basket is intended to provide money market funds with a safe holding place to prevent illiquid securities from causing a deterioration of a money market fund’s NAV during periods of illiquidity for these securities. While rated money market funds continue to be managed conservatively, and thus maintain high ratings, the introduction of less-liquid securities might result in increased price risk.

In 2003, we modified our Principal Stability Fund Rating criteria to address the increased price risk introduced when stable NAV funds invest in securities with limited liquidity by creating a 10% limited liquidity/illiquid basket. This criterion was developed to address a trend of less-liquid securities being introduced into certain stable NAV funds, including rated money market funds. We are concerned that occurrences in the marketplace could create a potentially less-liquid market for these securities and a NAV pricing problem for funds.

The following list of securities should be considered part of a Standard & Poor’s Principal Stability Fund Ratings limited liquidity/illiquid basket. In addition, we may still consider securities not listed below as possessing limited liquidity:

- Funding agreements exceeding seven days to maturity (unless the fund holds an unconditional put providing for liquidity within seven days).
- Term repurchase agreements exceeding seven days to maturity (unless the fund holds an unconditional put providing for liquidity within seven days).
- Securities denominated in a currency other than a fund’s base currency and swapped back into the fund’s base currency.
- Time deposits exceeding seven days to maturity, unless the deposit agreement has a specific option enabling the holder to break the deposit without a penalty or additional cost.
- Master promissory notes and loan participation notes exceeding seven days to maturity (unless the fund holds an unconditional put providing for liquidity within seven days).
- Credit-linked notes (CLNs).
- Extendible corporate notes where the investor does not possess the option to extend.
- Extendible asset-backed CP that when booked to the expected maturity date exceeds seven days to maturity and do not meet the five conditions outlined above.
- Money market tranches of CDOs that exceed seven days to maturity, unless:
  - It has an unconditional put providing for liquidity within seven days, or;

- It is booked to the legal final maturity date, or;
  - The liquidity facility offers full third-party committed support without extension risk.
  - CP of CDOs, unless:
    - Backed by a 100% third-party liquidity support, and absent an extension feature or delayed draw feature, or;
    - Booked to the legal final (put/extension) maturity date if backed by 100% third-party liquidity support that possesses an extension feature or delayed draw feature (e.g., of two to three days);
  - ABCP single-seller conduits investing in senior tranches of CDOs that rely on liquidity support with a remarketing put mechanism, unless:
    - It is booked to the legal final (put/extension) maturity date.
- Extendible asset-backed liquidity notes that are booked to their legal final maturity date will not be required to count toward the 10% limited liquidity basket. Additionally,
- nonagency callable notes (sometimes referred to as “Reverse Extendible Notes”) booked to the call dates and extendible asset-backed liquidity notes booked to the expected maturity date will be required to count toward the 10% limited liquidity basket for rated Principal Stability funds unless the program meets all of the following conditions:
1. Current outstanding issuance balance of at least \$1 billion;
  2. Issued by a sponsor that has a minimum of three years activity in the securitization market involving the asset classes described below;
  3. Limited to programs backed by credit card receivables, auto and auto-related assets/receivables, residential mortgage loans, home equity loans, and/or federally guaranteed (U.S. government) student loans;
  4. A minimum of two dealers actively making a market for the program;
  5. Issued via a Master Trust Structure or by an issuer/sponsor that has Standard &

Table 2 Impact Of Dilution

Assumptions	
Portfolio asset value:	\$100 million
Weighted average maturity:	90 days
Number of shares:	100 million
Share value:	\$1.00
Share price:	\$1.00
<b>Event 1: Interest rates rise 150 basis points (1.50%)</b>	
<b>Result:</b>	
Number of shares:	100,000,000
Portfolio value drops to:	\$99,630,000
Unrealized loss:	\$370,000 (\$100,000,000 - \$99,630,000)
Share value:	\$0.9963 (\$99,630,000/100,000,000 shares)
Share price:	\$1.00 per share
<b>Event 2: In conjunction with Event 1, fund experiences 25% redemption</b>	
<b>Result:</b>	
Number of shares:	75,000,000
Portfolio value drops to:	\$74,630,000 (\$99,630,000 - \$25,000,000)
Unrealized loss:	\$370,000
Share value:	\$0.9947 (\$74,630,000/75,000,000 shares)
Share price:	\$0.99 per share

Poor's publicly rated investment-grade asset-backed debt outstanding as described above and surveillance data on asset pool performance is publicly available (e.g. regularly/monthly published pool reports).

As long as an XABCP program meets all five points listed above, it may be excluded from the limited liquidity/illiquid basket regardless of whether a program is single-seller or multi-seller. Additionally, the dollar amount of the program should be applied to the base currency of the fund. Should the dollar amount outstanding of a program drop below the one billion threshold, Standard & Poor's will evaluate on a case-by-case basis the treatment of such a program under its

limited liquidity criteria. An important determination will be the commitment from the sponsor to the program.

We believe these securities can be less liquid due to their relative newness to money markets, limited trading activity or inactive secondary markets, dependency on a single issuer or broker, small number of dealers making a market in the security, customization of the security, or the complex nature of the security. Since liquidity is defined as the speed at which the security can be sold for the price at which the fund has it valued, accurate pricing and a deep secondary market are considered key in the determination and stability of the fund's overall marked-to-market calculation. We also

## Multifactor Net Asset Value Sensitivity Analysis

Standard & Poor's Principal Stability criteria for rating money market funds incorporate analysis of both interest rate sensitivity and redemption/subsorption volatility. We have established maximum WAM guidelines, which, under most market conditions, protect against significant market price fluctuation. When WAM values are analyzed in lock-step with redemption/subsorption assumptions, NAV volatility is exacerbated. NAV is sensitive to interest rate shifts, net redemptions, and the combined effects of sudden interest rate shifts and instantaneous net redemptions (see Standard & Poor's Sensitivity Matrix). The end column of Standard & Poor's Sensitivity Matrix shows NAV change due to interest rate increases with no redemptions. The critical assumption needed to compute the values for this column is that WAM represents, to some extent, duration of the portfolio. This assumption having been made, an example using a hypothetical money market fund will be used to illustrate the methodology behind the sensitivity analysis.

Assume the hypothetical money market fund has a NAV of \$1.00 and a WAM of 60 days when the market experiences a 250 bp interest rate increase:

### Formula 1

$$\begin{aligned} \text{New NAV} &= \text{NAV} - (\text{WAM}/365) * (\text{bp shift}/10,000) \\ 0.99589 &= 1.00000 - (60/365) * (250/10,000) \end{aligned}$$

The next consideration in the model is dilution. Dilution occurs when shareholders are paid \$1.00 per share while the fund's NAV is less than \$1.00. To complete the example, assume the hypothetical money market fund now suffers the effects of dilution due to a 20% redemption when the NAV is 0.99589. The following formula would be used:

### Formula 2

$$\begin{aligned} \text{New NAV} &= (\text{NAV} + [\% \text{ change}]) / (1 + [\% \text{ change}]) \\ 0.99486 &= (0.99589 + [-0.20]) / (1 + [-0.20]) \end{aligned}$$

Thus, the NAV of a model fund that experiences a 250 bp interest rate shift and a subsequent redemption of 20% would fall to 0.99486. The results of several different scenarios assuming different interest rate increases and redemptions are detailed in Standard & Poor's Sensitivity Matrix.

believe it is important for each rated fund to determine a diversification level that is prudent given the overall makeup of the fund, including establishing sensible guidelines as to what percentage a fund will hold of the total program outstanding.

Limited liquid and illiquid securities combined should not exceed 10% of a rated fund's total assets. We will continue to evaluate the market and trading activity of these securities and will reevaluate its position and ratings criteria on these limitations. We regularly review our Principal Stability Fund Ratings Criteria and make appropriate modifications based on developments in the market and our views of the risks posed to rated funds.

We assign ratings to money market funds based on the fund's credit quality and liquidity, and its ability to manage both the market risks and liquidity risks associated with these holdings given its shareholder base. Each money market fund's liquidity needs and its ability to hold and manage less-liquid securities is considered on a case-by-case basis. A fund with a limited operating history or a volatile shareholder base may not be able to effectively manage and maintain a high degree of share price stability with any exposure to securities with limited liquidity. In addition, a fund manager must be able to clearly and effectively demonstrate a thorough understanding of the risks presented

**Table 3 Standard & Poor's Sensitivity Matrix**

<b>Assumptions: WAM = 30 days: Starting Market Value = \$1.00 per share</b>					
<b>BP increase</b>					
300	0.9965	0.9969	0.9973	0.9974	0.9975
250	0.9971	0.9974	0.9977	0.9978	0.9979
200	0.9977	0.9979	0.9982	0.9983	0.9984
150	0.9983	0.9985	0.9986	0.9987	0.9988
100	0.9988	0.9990	0.9991	0.9991	0.9992
50	0.9994	0.9995	0.9995	0.9996	0.9996
Redemption	30%	20%	10%	5%	0%
<b>Assumptions: WAM = 60 days: Starting Market Value = \$1.00 per share</b>					
<b>BP increase</b>					
300	0.9930	0.9938	0.9945	0.9948	0.9951
250	0.9941	0.9949	0.9954	0.9957	0.9959
200	0.9953	0.9959	0.9963	0.9965	0.9967
150	0.9965	0.9969	0.9973	0.9974	0.9975
100	0.9977	0.9979	0.9982	0.9983	0.9984
50	0.9988	0.9990	0.9991	0.9991	0.9992
Redemption	30%	20%	10%	5%	0%
<b>Assumptions: WAM = 90 days: Starting Market Value = \$1.00 per share</b>					
<b>BP increase</b>					
300	0.9894	0.9908	0.9918	0.9922	0.9926
250	0.9911	0.9923	0.9932	0.9935	0.9938
200	0.9929	0.9938	0.9945	0.9948	0.9951
150	0.9944	0.9954	0.9959	0.9961	0.9963
100	0.9964	0.9969	0.9973	0.9974	0.9975
50	0.9982	0.9985	0.9986	0.9987	0.9988
Redemption	30%	20%	10%	5%	0%

by the security and internally price or value the security.

### Shareholder Characteristics

A money fund's market price exposure is also affected by the flow of money in and out of the fund. Unexpected redemptions can have a direct influence on a fund's NAV. Therefore, we carefully review the characteristics of each fund's shareholder base to determine the potential impact that significant redemptions might have on a fund's market price exposure. Money funds are permitted to issue and redeem shares at \$1.00, provided that their market value is between \$0.995 and \$1.005. Because funds can pay out \$1.00 on shares that may actually be worth as little as \$0.995, the remaining shareholders in the fund absorb the difference. This is referred to as dilution, as redeeming shares at a price above their actual market value is diluting the value of the fund's holdings.

Dilution can accelerate fund losses in a rising interest rate environment, causing a fund to break the dollar. In the below example, Impact of Dilution, a 150 bp rise in interest rates causes a 90-day WAM portfolio's market value to drop to \$0.9963 per share. A subsequent 30% redemption (paid out at \$1.00 per share) dilutes the portfolio's value to \$0.9947, thus breaking the dollar. This occurs because although the unrealized loss in the fund remains the same, the loss is spread over a smaller number of shares. While sudden 150 bp rises in interest rates are rare, several large redemptions during a period of steadily rising interest rates can produce similar results.

Dilution concerns are heightened for funds with sophisticated institutional shareholders. These investors realize that a fixed \$1.00 NAV is an illusion based on convenient valuation methods, and can easily take advantage of this phenomenon. For example, if an investor held \$1 million in 90-day U.S. Treasury bills yielding 5%, and if interest rates increased 150 bps, the value of the investment would drop by approximately \$3,700 and the investor's yield would remain at 5%. Instead, assume that the investor held one million shares of a money market fund

holding exclusively Treasury bills with a WAM of 90 days and yielding 5% (setting aside fund expenses for this example). If interest rates rose 150 bps, the investor could sell the fund investment for \$1.00 per share and not experience any loss. The investor could then purchase 90-day Treasury bills yielding 6.5%, instantaneously increasing its return by 1.5%. If this type of market-sophisticated shareholder, who is apt to chase yields, represents a material percentage of a fund's assets, substantial dilution in share prices is likely because of large and sudden redemptions.

In analyzing money market funds, our review of shareholder constituency encompasses the number, average holding size, type, size of the largest accounts, historical asset volatility, and the relationship fund management has with its largest investors. The proportion of retail versus institutional investors and the past history of redemptions are also examined. Funds with histories of volatile subscription and redemption patterns are expected to maintain shorter weighted average portfolio maturities.

We expect a fund's investments to be tailored to its potential cash-flow needs. For funds with a volatile or potentially volatile shareholder base, a more conservative approach must be taken with regard to WAM and liquidity. Funds with more stable or predictable cash flows, such as retail funds or institutional funds with large, diverse shareholder compositions, can be somewhat more aggressive. We use a matrix that stress-tests portfolios based on the effect of interest rate movements and redemptions at a variety of WAM levels (*see Multifactor Net Asset Value Sensitivity Analysis, pgs. 25-26 and table 3*).

Portfolio structure is also a factor in determining the risk dilution presents to a fund. Funds with a barbelled maturity structure (heavily weighted in short-term maturities with the remainder in longer-term securities) are more susceptible to the negative effects of shareholder redemptions than are ladderred portfolios (relatively evenly spaced maturities). If a barbelled fund experiences redemptions in a rising interest rate environment, the short end of the fund will likely be liquidated to avoid taking significant realized losses. This

will cause the WAM of the fund to extend, creating greater interest rate sensitivity and exacerbating the negative effects of future redemptions. Laddered portfolios are less exposed in these circumstances, although they are by no means insulated from rising interest rates and redemptions. As part of the rating process, we consider whether each fund's portfolio structure is best suited to its shareholder base and potential asset outflows.

### Pricing

We expect that all money market fund investment advisers have the ability to price (mark to market) portfolio securities and calculate NAV in-house. Additionally, we request all funds rated for principal stability to price securities at least weekly. In many cases, investment advisers rely exclusively on fund administrators to perform such functions. While fund administrators have proven capable providers of such services and provide independent prices, we believe that all investment advisers should have some built-in redundancies to check the administrators' work, questioning any discrepancies that may occur. For securities that are difficult to price, such as structured notes or other less-liquid instruments, including those securities that have embedded optionality, two or more dealer bids are suggested.

A Standard & Poor's principal stability rating directly addresses the ability of a fund to maintain a NAV that does not deviate by more than one-half of 1%. For a fund to effectively stay within this narrow range, accurate pricing of its securities is essential. Most money market fund instruments are highly liquid and easy to price. Nevertheless, some complex, structured, and derivative securities present pricing difficulties.

Complex and derivative securities often lack efficient, liquid markets. Trading in these securities can be infrequent, creating varying price quotes among dealers and wide bid/ask spreads. The prices of these types of securities

may be determined in a variety of ways, including dealer quotes, matrix pricing formulas, spreads to benchmark securities, pricing services, or even by the fund advisers themselves. All of these methods have drawbacks. Dealer quotes on thinly (infrequently) traded securities often represent indicative pricing levels and rarely constitute an actual bid to purchase the security. Matrix prices, pricing service quotes, and spread calculations are not based on actual trades, and do not represent a price at which anyone actually offered to purchase the security. These methods calculate a hypothetical price that is not verifiable. Pricing by fund managers often occurs when the manager either disagrees with the other pricing methods or holds securities so unique that other pricing methods are inadequate. Clearly, even if the fund manager can determine fair value prices based on in-depth analytics, it is far from certain that any buyers are willing to purchase the securities at or near those prices.

Before purchasing complex, derivative, or otherwise illiquid or less-liquid securities, portfolio managers should carefully examine the pricing issue. It is necessary to evaluate the number of available pricing sources, with an eye toward identifying material discrepancies. Portfolio managers should also be aware of pricing methodology, and compare the results to recent trading activity. It is inadvisable for a fund's manager to solely accept the calculations of a security's issuer or dealer in determining the value of an investment. This information may be either highly biased or based on inaccurate assumptions, or both. Portfolio managers should not only be able to determine their own fair value for securities that are difficult to price, but need also to consider the marketplace for each security and the potential volatility that can be caused by inefficient market pricing. If a fund adviser lacks the ability to assess the potential market behavior of a security with a high degree of comfort, the security should not be purchased for that money market fund. ■

# Security-Specific Criteria

Standard & Poor's Ratings Services' Principal Stability fund ratings (also known as money market fund ratings) analysis focuses on the credit quality of a fund's investments and counterparties, the market price exposure of its investments, and management's ability and policies to maintain the fund's stable net asset value (NAV) by limiting exposure to loss. We have published criteria on these areas, and it can be found at [www.standardandpoors.com](http://www.standardandpoors.com). In addition to these published criteria articles, the following is a discussion of the Principal Stability fund rating criteria for specific securities and asset classes.

## Government Agency Concentration

Liquidity analysis, or the ability to return an investment for cash, is performed on all issues and issuers regardless of credit quality. Securities with minimal credit risk, such as U.S. government agency obligations, may deviate in price for reasons other than interest rate movements. While the credit quality of these agencies is not typically a major concern, adverse publicity or market rumors about an agency can affect the price and liquidity of all agency securities, including those from the U.S. government. For this reason, we consider diversification to be an important feature of all securities. Yield spreads between short-term agency securities (for both fixed- and variable-rate notes) and traditional benchmarks (such as the Treasury bill) may widen under numerous conditions. For fixed-rate securities with maturities of less than one year, the impact of spread widening on the price of the

security is minimal. Nevertheless, given the small margin for error that stable NAV funds permit, high concentrations in the securities of any one agency might expose the fund to material spread-widening risks.

For these reasons, we have established government agency diversification criteria for Principal Stability fund ratings. Generally, we expect no more than 33.33 percent exposure to any single government agency. When exposures exceed 40%, funds will be expected to maintain lower weighted average maturities (WAMs) and/or increased levels of highly liquid securities to reduce this exposure. Exclusively to these securities, the impact of spread widening can be viewed as synonymous with rising market interest rates. Therefore, if a fund had a 50% concentration in any one agency, and spreads for that agency's securities widened by 20 basis points (bps), the impact on the market value of the fund's overall

portfolio could be comparable to the effect of market rates rising 10 bps without that spread widening.

Holding all other factors constant, funds with a WAM of 60 days should be able to withstand up to a one-day, 300 bps rise in interest rates without “breaking the dollar.” We have calculated various levels at which a fund would break the dollar for different U.S. agencies, given various spread-widening assumptions. The spread-widening and instantaneous interest rate rise assumptions differ for each rating category, as shown in the following section.

These criteria are meant as general guidelines. Circumstances may differ among funds based on certain factors, which include maturities of the agency securities, type of securities (fixed-versus variable-rate), other sources of fund liquidity, and the issuing agency.

Some U.S. government money market funds (sometimes referred to as “government-only” funds) are established to invest purely in U.S. government securities paying interest and generally exempt from state income taxation. These securities include obligations issued by the U.S. Treasury and certain U.S. government agencies, instrumentalities, or sponsored enterprises, such as the Federal Home Loan Bank and the Federal Farm Credit Bank. Because there are only a few U.S. government agencies that meet this criteria, Standard & Poor’s rated government-only money market funds can have a difficult time managing to the strict diversification guidelines. Therefore, for government-only money market funds, our criteria permit exposures beyond the 33.33% limit, as long as all amounts exceeding the 33.33% limit mature in 30 days or less.

### Variable And Floating-Rate Securities

We expect investment policies to include clear and explicit guidelines regarding variable-rate notes (VRNs), floating-rate notes (FRNs), and other synthetic instruments. Fund investment policies should clearly incorporate procedures regarding approval, risk measurement, control, and limits related to investment in structured notes and other less-liquid secu-

rities. Fund managers holding such securities should be able to present an analytical basis for determining that such notes have a reasonable likelihood of maintaining, or being repriced to, amortized cost value at each reset until maturity. This analytical basis should include a review of historical index behavior and sensitivity analysis.

Our criteria for FRNs and VRNs in rated money market funds call for written guidelines and procedures that ensure:

- No purchase of range notes, dual index notes, “deleveraged” notes (notes linked to a multiple of the index where the multiple is less than one), or notes linked to lagging indices (e.g., Cost Of Funding Index [COFI]) or to long-term indices (e.g., five-year or 10-year Treasuries).
- No purchase of VRNs with coupons tied to indices, index formulas, or index spreads with less than 95% correlation with the U.S. Fed Funds Rate. Indices with historically high correlations are: Three-Month Treasury Bill, Six-Month Treasury Bill, Three-Month LIBOR, Six-Month LIBOR, One-Year Constant Maturity Treasury (CMT), Prime Rate, and CP Composite.
- At the ‘AAAm’ level, the final maturity for all FRNs/VRNs will not exceed one year (397 days) for U.S.-registered funds. Nevertheless, government issues maturing up to two years (762 days) from time of purchase are eligible.
- At the ‘AAM’ level, the final maturity for all FRNs/VRNs will not exceed one year (397 days) for U.S.-registered funds. Nevertheless, government issues maturing up to three years (1,127 days) from time of purchase are eligible.
- At the ‘Am’ level, the final maturity for all FRNs/VRNs will not exceed one year (397 days) for U.S.-registered funds. Nevertheless, government issues maturing up to four years (1,492 days) from time of purchase are eligible.
- At the ‘BBBm’ level, the final maturity for all FRNs/VRNs will not exceed one year (397 days) for U.S.-registered funds. Nevertheless, government issues maturing up to five years (1,857 days) from time of purchase are eligible.

## Weighted Average Maturity Adjustments For Agency Concentrations

To compensate for the potentially negative impact of the spread widening of highly concentrated government agency positions, our Principal Stability Criteria has established WAM adjustment factors for money market funds rated 'AAAm' to 'BBm'.

### Methodology

Step 1: We assume the following worst-case spread widening and instantaneous interest rate rises (see table 1):

Rating category	Spread widening (bps)	Interest rate increase (bps)
AAAm	100	300
AAm	75	260
Am	50	225
BBBm	25	200

Step 2: The spread-widening number is then multiplied by the fund concentration in the securities of any one agency.

Step 3: The product is then added to the applicable interest rate increase to determine the equivalent interest rate sensitivity that the fund may exhibit.

Step 4: The interest rate sensitivity equivalent calculated in Step 3 is applied to Standard & Poor's interest rate sensitivity matrix to determine the maximum WAM that allows the fund to maintain an NAV above 0.9950.

### Application

Because there is a range of maximum WAMs for each rating category, with the actual maximum determined on a case-by-case basis, we use adjustment factors to determine the proper maximum WAM for each fund. The adjustment factors are simply the maximum WAM for the rating category minus the WAM determined in Step 4 above.

### Example

1. Assume an 'AAAm' rated fund has a 50% agency concentration in FHLBs.
2.  $(0.5) * (100 \text{ bps spread widening}) + (300 \text{ bps interest rate rise}) = 350 \text{ bps}$ .

3. At an instantaneous interest rate rise of 350 bps, a fund with a WAM of 52 days or less will remain above 0.995. Because the maximum WAM for the 'AAAm' rating category is 60 days, the adjustment factor is equal to 60 days minus 52 days, or eight.

**Table 2 'AAAm' Level (100 Bps Spread, 300 Bps Movement)**

Agency concentration (%)	Adjustment factor (from 60 days)
40-44	7
45-54	8
55-64	10
65-70	11

**Table 3 'AAm' Level (75 Bps Spread, 260 Bps Movement)**

Agency concentration (%)	Adjustment factor (from 75 days)
40-44	13
45-54	14
55-64	16
65-70	17

**Table 4 'Am' Level (50 Bps Spread, 225 Bps Movement)**

Agency concentration (%)	Adjustment factor (from 90 days)
40-44	16
45-54	17
55-64	19
65-70	20

**Table 5 'BBBm' Level (25 Bps Spread, 200 Bps Movement)**

Agency concentration (%)	Adjustment factor (from 90 days)
40-44	4
45-54	5
55-64	6
65-70	7

- Where valuation is not based on actual dealer bids, there must be clear notification and disclosure of all other valuation methodologies used (e.g., matrix pricing). Pricing policies should include techniques to verify and validate FRN/VRN pricing on a recurring basis.
- Weekly reporting of FRN/VRN holdings to Standard & Poor's should include current market price, CUSIP, coupon or interest rate terms, frequency of reset, market value, put features, and any other significant terms and conditions.

### Index And Spread Risk

VRNs and FRNs present unique market price risks. VRNs and FRNs used in money funds are typically linked to conventional money market indices, providing funds with yields that track short-term interest rate movements. These investments are designed to exhibit less interest rate risk when compared with fixed-rate investments, but this is not always the case. Factors affecting the value of these instruments include index risk and spread risk.

Index risk is the possibility that the coupon of a VRN or FRN will not adjust in tandem with money market rates. Index risk can be introduced by calculating the variable-rate coupon based on a nonmoney market index, a money market index in which the coupon adjusts based on a multiple (or fraction) of the index, or an index based on the difference (or spread) between two or more indices.

When analyzing VRNs and FRNs in money market funds, we compare the index used in the variable-rate adjustment formula to a standard money market index, such as the Federal Funds Rate. We believe that for all money funds rated 'BBBm' and above, the index should have a correlation of at least 95% of the effective Fed Funds Rate. By this measure, nontraditional money market fund indices, such as the 11th District Cost of Funds Index (COFI) and the Two-Year Constant Maturity Treasury Index, are clearly unsuitable, with historical correlations of below 95% (see table 6).

The Canadian Dollar Offered Rate (CDOR) is the recognized benchmark index for banker's acceptances with a term to maturity of one

year or less. It is determined daily from a survey of nine market makers, and is calculated using a survey of different maturity bands including one-month BA, two-month BA, three-month BA, six-month BA, one-year BA, and call markets, where the high and low rates are removed to minimize any bias and an average is calculated for the remaining survey rates. The results are released at 10:15 a.m. each business day. We have found a high correlation between this benchmark and the Canadian Bank Rate during a historical 10-year period. Based on this study, we have approved this benchmark within Canadian Principal Stability Rated Funds.

Some VRNs and FRNs may use indices that are highly correlated to traditional money market indices. Yet, because of their rate adjustment formulas, they can still introduce significant price risk. One example is an adjustment formula tied to a multiple or fraction of a money market index. For this reason, stress testing is important. Although there are a variety of valid techniques to model potential performance of these securities under adverse market environments, one straightforward approach is to look at

**Table 6 Correlations Of Various Indices**

—Monthly data from 11/30/1992 to 11/30/2006—

Index	Correlation to Fed Funds (%)
Fed Funds	100.00
Prime	98.76
30 Day CP	98.66
1 Month LIBOR	98.41
60 Day CP	98.37
90 Day CP	98.06
3 Month LIBOR	98.07
3 Month T-Bill	97.90
6 Month LIBOR	97.21
6 Month T-Bill	96.97
1 year CMT	95.88
1 year T-Bill (Composite)	95.30
2 year CMT	92.02
MUNI PSA Index	91.78
COFI	90.46

Source: Bloomberg. LIBOR—London Interbank Offered Rate.  
CMT—Constant Maturity Treasury. COFI—Cost of Funds Index.

VRN/FRN performance under significant interest rate movements. If a VRN/FRN can withstand a 3% (300 bps) move in rates without causing its value to deviate significantly, the VRN/FRN should behave adequately in most interest rate environments. To “pass” the 3% stress test, the yield on the VRN/FRN would need to increase by a comparable amount.

The ultimate maturities of VRNs/FRNs are also risk factors. The concern here is not index risk, but the spread risk associated with longer-dated securities. For example, a government agency may issue five-year adjustable-rate notes that reset weekly at the Three-Month Treasury Bill Rate plus 5 bps. Over a period of time, these securities may be perceived by the market as warranting a higher spread to the Three-Month Treasury because of liquidity, credit, supply and demand, political events, or volatility in market interest rates. Investors may demand that subsequent comparably dated securities of that agency be sold at 30 bps above the Three-Month Treasury Bill Rate. This potentially creates a negative drag of 25 bps for the remaining life of the original security and could materially affect its market value. This may occur even though the maturities of these VRNs can be calculated at seven days (time to next reset) for regulatory purposes or their coupons are tied to a highly correlated index.

Because of the potential impacts of spread risk on the market prices of VRNs and FRNs, we expect rated funds to limit the remaining maturity of U.S. government VRNs/FRNs to two years (762 days) for ‘AAAm’, three years (1,127 days) for ‘AAm’, four years (1,492 days) for ‘Am’, and five years (1,857 days) for ‘BBBm’. Corporate and structured (e.g., ABS) VRNs/FRNs have the added risk of credit deterioration and should be limited to final maturities of 13 months or less for money market funds registered under rule 2a-7 of the Investment Company Act of 1940. The percentage of VRNs/FRNs in a fund also enters into the rating analysis to determine a fund’s overall risk profile. For example, a fund that was 50% invested in VRNs/FRNs with four-year remaining maturities would not receive an ‘Am’ rating due

to spread risk concerns. Percentages of VRNs/FRNs in each fund are analyzed on a case-by-case basis in conjunction with the fund’s other holdings.

### Callables, Convertibles, And Similar Structures

Callable and convertible notes are designed to perform well in stable interest rate environments. Both callable and convertible notes can present funds with unique market risks including call risk, reinvestment risk, interest rate risk, and liquidity risk. Given these multiple risk factors, managers should closely evaluate the pricing and market risks presented by these securities.

Corporations and government agencies issue short-term callable debt generally with one-year final maturities and monthly or quarterly call dates. Due to the call feature, the interest rates (yield) for these securities are generally higher than those for equivalent noncallable instruments. The added risk is “uncertain” principal maturity. There are several ways that this risk can manifest itself; for example, during periods of rising interest rates, the value of these callable notes will decrease, as would a similar noncallable fixed-income security. During a period of falling rates, however, the price of callable notes will not appreciate in proportion with noncallable notes given the increased likelihood that the callable notes will be called at the next call date. Investors will be unwilling to pay any material premium in the purchase price given the call risk.

Callable note investors also face the risk of having their notes called away when rates fall. Issuers are more likely to call (or retire their outstanding debt) when interest rates have dropped as this provides an opportunity to obtain cheaper financing. Reinvestment risk is present as investors of callable notes that are called will have to reinvest at lower rates.

Convertible notes are a variation on short-term callable notes, as convertible notes, while not callable, can be converted from a fixed rate to a floating rate at the option of the issuer. The holder is short the convertible feature, and thus is paid a yield premium to offset this uncertainty or risk. Like callables,

convertible notes are typically issued with one-year final maturities at attractive fixed rates or with predetermined floating-rate formulas. The value of convertible notes will also fall during rising rate periods, behaving much like standard fixed-rate instruments—however, when rates fall, the price appreciation of convertible notes will be limited due to the increased likelihood of conversion. The conversion risk is similar to call risk and thus has similar inherent price or market risks. The key difference is that upon conversion, the interest earned on the convertible notes is based on a predetermined formula, while the note holders control the reinvestment options for the callable notes.

Standard & Poor's believes it is prudent for fund managers to perform stress tests on these securities under various interest rate scenarios to determine the relative value of holding these securities during periods of both rising and falling rates. Assumptions should include the magnitude of the interest rate decline required for the securities to be called or converted and the frequency of the options that may be exercised (monthly, quarterly, and so forth). Managers should closely evaluate the risk and reward trade-offs presented by these securities before investing in these notes.

In holding convertible notes, a fund is taking all the risks of a fixed-rate instrument, while potentially receiving the lower returns that floating-rate instruments provide in a declining interest rate environment. To make these notes more attractive, issuers typically set the floating-rate reset formulas at spreads above an index (such as Fed Funds or LIBOR) that are higher than the market rate for variable-rate securities. While such formulas may look enticing in the near term, spreads may widen over time, potentially creating a below-market yield at such times as the notes are converted. In fact, the issuers of convertible notes have an incentive to exercise the conversion option should spreads widen sufficiently, even if short-term interest rates remain stable. In essence, this gives them the opportunity to finance at below market rates. This risk does not apply to callable notes because once the security has

been called, the holder is free to reinvest at current market rates, either fixed or variable.

Since callable and convertible notes are more complex than standard fixed-rated securities, determining reliable prices for these is a more difficult task. Managers should price these securities to market on a regular basis with multiple broker-dealers or reliable sources to ensure accurate market values as dealer quotations are subject to a wide degree of subjectivity. Since these securities often lack an efficient and liquid secondary market, portfolio managers should be able to value these securities internally based on their own in-depth analysis. Given the less liquid nature of these instruments, the securities can experience higher price volatility.

When calculating the WAM for Standard & Poor's rated funds, callables and convertibles should be booked to their final maturity dates. If the issuer exercises the option on the convertible note, then the maturity can be calculated to the next reset date, assuming the price on the note can still reasonably be expected to remain at or near par on subsequent reset dates. If spreads for comparable floating-rate notes have changed materially, the convertible notes should continue to be booked to their final maturity dates.

Standard & Poor's will evaluate other structures—such as agency flippers (also known as agency flip-flops), step-ups, and other similar structures—using similar criteria. Further, Standard & Poor's believes that because of the inherent risks present in these securities, rated funds should impose defined limitations to their exposure to callable and convertible notes, thereby mitigating the risk of unanticipated price volatility. These limits should be based on the fund's cash flow volatility, liquidity needs, and overall market price exposure.

### Repurchase Agreements (Repos)

Repos are agreements whereby a holder of securities sells such securities to a counterparty and agrees to repurchase them at an agreed future date at an agreed upon price. Money market funds invest in repos because they

are highly liquid short-term instruments backed by collateral. Additionally, they may offer more attractive yields than other permissible investments.

### Counterparty risk

While we recognize the importance of the collateral securing these repos, our main focus regarding their risk in the context of money market fund ratings is on the counterparty's creditworthiness. The reason for this is that a default by a repo counterparty that results in a fund taking possession of the underlying collateral could create both liquidity and market risks inappropriate for stable net asset value (NAV) funds.

These risks exist because most repos' underlying securities are typically ineligible investments for money market funds, either because of their maturity (longer than 397 days) or type (for example, certain MBS). A fund that takes possession of such collateral will have to sell it as soon as possible. Any delay in a fund's ability to sell the securities could expose the fund to losses based on the difference between the price of the repo and the collateral proceeds. Moreover, any delay in the sale of such securities could affect a fund's liquidity.

As a result, we have diversification criteria to limit a fund's repo exposure based on the counterparty rating, as well as criteria for evaluating repo counterparties. These criteria vary depending upon whether the repos are "qualifying" repos or "nonqualifying" repos (as discussed below). The criteria for qualifying repos is less restrictive than that for nonqualifying repos and such criteria is now being applied to a broader range of repo instruments to maintain consistency in light of recent market trends.

### Criteria for qualifying repos

Our approach takes into account the special protections that certain qualifying repos are eligible for under the Bankruptcy Code. Qualifying repos are repos that fall under a Bankruptcy Code safe harbor and are not subject to the automatic stay when a repo counterparty is insolvent and bankruptcy proceedings commence. The basis for the differing criteria is that qualifying repos are not

subject to the same delays that nonqualifying repos may be subject to when a counterparty defaults and files for bankruptcy. A fund may be able to liquidate, terminate, or accelerate the qualifying repo with greater flexibility and less exposure to market and liquidity risks.

*Qualifying repos may include traditional and nontraditional collateral.* While less restrictive criteria has existed for qualifying repos (formerly known as traditional collateral criteria), this criteria has been renamed to refer to a broader range of asset types that may be used as collateral for repos. Whereas previously, qualifying repos included only traditional collateral (such as U.S. government or U.S. government agency securities including Treasuries, Agency Discount Notes, and Agency MBS), now qualifying repos can include nontraditional collateral (such as investment- and noninvestment-grade corporate debt, money market securities, and even shares of U.S. equities to back their repo obligations) if the funds themselves meet certain tests.

The reason for this change has to do with both the growth in nontraditional collateral repos and the expansion of asset types underlying repos entitled to special protections under the Bankruptcy Code. While the growth in nontraditional collateral has been partly spurred by brokers seeking to leverage other asset types, the demand is primarily fueled by the funds in search of higher yields and the added basis points that come with the nontraditional collateral.

These market changes have been reflected to a certain extent in recent amendments to the Bankruptcy Code. In one change, the definition of repos under the repurchase agreement safe harbor has been expanded to specifically include certain nontraditional asset types such as investment-grade MBS. In another change, certain entities have been specifically added to Bankruptcy Code provisions so as to be able to rely on other safe harbors that provide special protections to a wide array of securities contracts, including repos.

In light of these changes, we have modified our criteria and will consider certain specified nontraditional collateral such as investment-grade MBS and other eligible nontraditional

collateral as qualifying repo collateral for purposes of our criteria.

Funds that seek to utilize the less-restrictive diversification criteria for nonqualifying collateral may either represent that such repos fall within the definition of a repurchase agreement under the Bankruptcy Code or provide legal opinions satisfactory to Standard & Poor's that provide assurance that:

- The fund meets the definition of either a financial institution or financial participant or otherwise qualifies as an entity entitled to benefit from special protections under the Bankruptcy Code with respect to securities contracts; and
- The fund's repos qualify as "securities contracts" as defined in the Bankruptcy Code.

If the fund enters into repos with financial institutions subject to the FDIA, the fund must provide assurance that the repos satisfy the definitions of "qualified financial contract" under the FDIA in addition to the definitions of either a repurchase agreement or a securities contract as the case may be.

We are reviewing the applicability of this approach concerning nonqualifying repos for funds registered outside the U.S.

*Diversification criteria for qualifying repos.* Our diversification criteria for qualifying repos is as follows for 'AAAm' rated funds:

- The aggregate amount of all repos (regardless of the rating) with maturities of more than seven calendar days may not exceed 10% of a fund's total assets;
- Repos with maturities beyond overnight and less than or equal to seven days with any single dealer (A-1+) are limited to no more than 25% of a fund's total assets;

- Repos with maturities beyond overnight and less than or equal to seven days with any single dealer (A-1) are limited to no more than 10% of a fund's total assets;
- Overnight repos with any single 'A-1' dealer are limited to no more than 25% of a fund's total assets.
- The aggregate amount of all repos with any single dealer (A-1) is limited to no more than 25% of a fund's total assets. For example, if a fund invested 20% in an overnight repo with an 'A-1' dealer, it may only invest another 5% in a term repo with that same dealer.

While we do not formally propose any diversification guidelines for overnight repos with any single 'A-1+' counterparty, we believe it is prudent for a rated fund to maintain a minimal amount of diversification, and thus we would be concerned about a fund that was comfortable holding more than 40% of its total assets in an overnight repo with any single 'A-1+' issuer or counterparty.

For purposes of these criteria, the maturity of a repo means the final maturity of the agreement. If, however, the agreement contains an unconditional put that would result in a lower effective maturity for the agreement, we will review the repo documentation to assess the unconditional nature of the put feature. We have the same criteria for both triparty and deliverable repos. Nevertheless, where a triparty repo is used, we will examine the fund adviser's procedures to assess whether the proper type and amount of collateral is received.

Our repo diversification criteria for funds rated 'AAm', 'Am', and 'BBBm' is identical to the above table except for the permitted

**Table 7 Summary Of 'AAAm' Criteria For Qualifying Repurchase Agreement**

Credit quality	Overnight (one day) (%)	Two to seven days (%)	More than seven days (%)
A-1+	*	25	10**
A-1	25	10	10**

\*While Standard & Poor's does not formally propose any diversification guidelines for overnight repos with any single 'A-1+' counterparty, we believe it is prudent for a rated fund to maintain a minimal amount of diversification, and thus we would be concerned about a fund that was comfortable holding more than 40% in an overnight repo with any single 'A-1+' issuer or counterparty. \*\*Aggregate exposure to term repo greater than 7 days is limited to 10%.

exposure to 'A-2' issuers on an overnight or one-day basis of 5% for 'AAM', 10% for 'Am', and 25% for 'BBBm'.

To assess whether repos are properly secured, we look for certain written representations from all funds investing in repos. Regarding perfection of the fund's security interest in repo collateral, we seek written representations that the fund takes delivery of the collateral in either of the following manners: The fund, or a third party acting solely as agent for the fund, has possession of the securities; or the securities have been legally transferred to the fund under other applicable laws, except that the fund may not enter into any hold-in-custody arrangements. In addition, we look for written representations that confirm the following:

- A written master repo (for example, the Bond Market Association standard repo form) governs all repo transactions;
- The fund takes all necessary steps to acquire and maintain a first-perfected security interest in any repo securities, any substituted securities, and all proceeds derived from the repo securities;
- For purposes of perfecting the fund's security interest, the counterparty owns all repo securities free of any other claims;
- The fund intends to pay the purchase price for the securities, as stated in the applicable governing agreement;
- The counterparty will not incur, or allow others to incur, any equal or prior liens on the securities;
- The fund has no knowledge of any fraud involved in any of the repo transactions it undertakes.

*Diversification criteria for nonqualifying repos.* All repos that are not "repurchase agreements" as defined under the Bankruptcy Code and that are held by a fund that is neither a financial institution, a financial participant, nor any other entity that is entitled to benefit from special protections under the Bankruptcy Code with respect to securities contracts are considered nonqualifying repos and are subject to more restrictive diversification criteria (formerly known as the nontraditional collateral criteria).

Since these nonqualifying repos may be subject to the automatic stay or to other

types of risks related to the bankruptcy of a counterparty, funds that invest in them are subject to greater liquidity and market risks than those investing in qualifying repos.

Our diversification criteria for nonqualifying repos call for the maximum exposure to any single counterparty (or broker/dealer) to be limited to 5% of total fund assets. This differs from qualifying repos, as they may comprise up to 25% per dealer depending on the credit quality of the broker/dealer.

Additionally, we consider term repo agreements beyond seven days (for both qualifying and nonqualifying repos) to be illiquid, and as such, these should be limited to no more than 10% of total fund assets. We also expect the underlying collateral in term repo agreements to be priced daily and maintained at the required collateralization levels.

#### Criteria for assessing the credit quality of repo counterparties

For purposes of applying our diversification criteria, we have criteria to determine the rating of repo counterparties. These criteria vary depending on whether the repos are qualifying or nonqualifying repos.

*Counterparties for qualifying repos.* We recognize that many stable NAV funds transact repos with unrated subsidiaries of highly rated financial institutions. For qualifying repos, we look directly to the short-term rating on the parent to determine the level of creditworthiness of unrated repo counterparties that are subsidiaries of rated entities. In establishing this criterion, we recognize that qualifying repos that are backed by collateral and benefit from special protections under the Bankruptcy Code differ from unsecured obligations.

Unrated entities that are at least 50% owned by rated parents are considered at the same investment level as the parent. Therefore, a repo transaction with an unrated broker/dealer whose parent has an 'A-1+' rating is assessed at 'A-1+' equivalent for Principal Stability fund rating purposes only. Likewise, a repo with an entity whose parent is rated 'A-1' is viewed as an 'A-1' equivalent for Principal Stability fund rating purposes only.

In the case of rated repo counterparties that have parents with higher short-term rat-

ings, we look to the rating on the parent in assessing the proper level, provided that the subsidiary is at least 50% owned. For all other rated repo participants, the actual Standard & Poor's short-term rating applies.

*Counterparties for nonqualifying repos.* Our credit quality criteria for nonqualifying repos calls for the counterparties (e.g. broker/dealers) to either have an explicit issuer or counterparty rating from Standard & Poor's of 'A-1' or 'A-1+' or deemed equivalent by Standard & Poor's, or have a letter of guaranty from an 'A-1' or 'A-1+' (Standard & Poor's-rated) parent company. This differs from qualifying repos, as such repos may be transacted with unrated broker/dealers that are 50% or more owned by a parent company that is rated 'A-1' or better by Standard & Poor's to qualify for the highest three rating categories (AAAm, AAm, and Am).

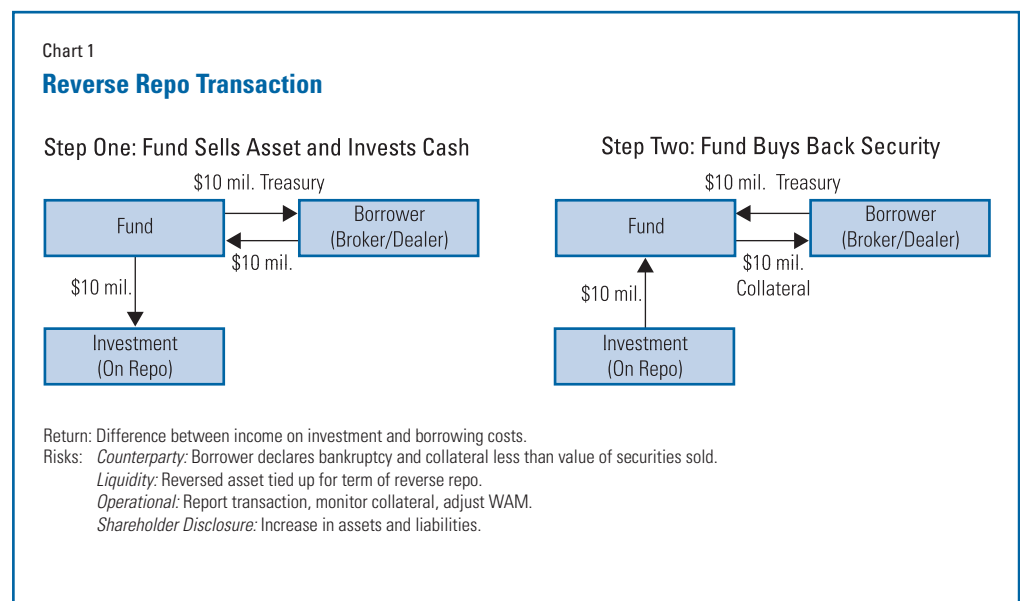
### Securities Lending And Reverse Repos

Reverse repos and securities lending are investment strategies used by some funds primarily to enhance investment income. These transactions can create risks for funds in the areas of credit and market price exposure in the form of leverage. Standard & Poor's has specific criteria concerning the lending of portfolio securities by a fund to banks and

broker/dealers. The criteria apply not only to direct loans of securities but also to reverse repos.

A reverse repo is a leveraging technique in which a fund agrees to sell a security it owns while simultaneously agreeing to repurchase it at a future time. The fund takes the cash and invests it in another asset. A reverse repo is often viewed as collateralized borrowing since a fund incurs a liability and uses the security as collateral. As an example, assume a money fund owns a \$10 million Treasury note and wants to borrow funds overnight. The fund will sell the \$10 million Treasury note to the counterparty for settlement today. At the same time, the fund agrees to buy back the \$10 million Treasury note for settlement tomorrow, plus interest. The result is that the fund has borrowed overnight funds for one day (rate times \$10 million times one day/360). During the term of the reverse repo, the fund's total assets and liabilities are increased by the amount of the reverse repo, while net assets remain the same (*see chart 1*).

The main reason for using reverse repos is to enhance income by investing borrowed cash at a higher rate than the cost to borrow (reverse repo rate). Portfolio managers also use reverse repos to provide liquidity to funds. For example, a portfolio manager may choose to raise cash via reverse repos to



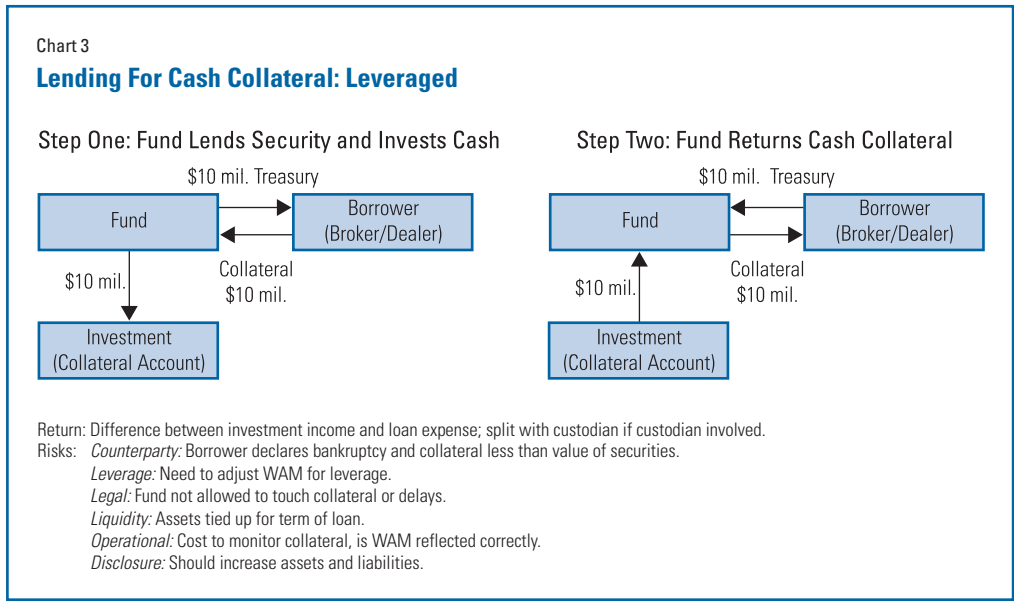
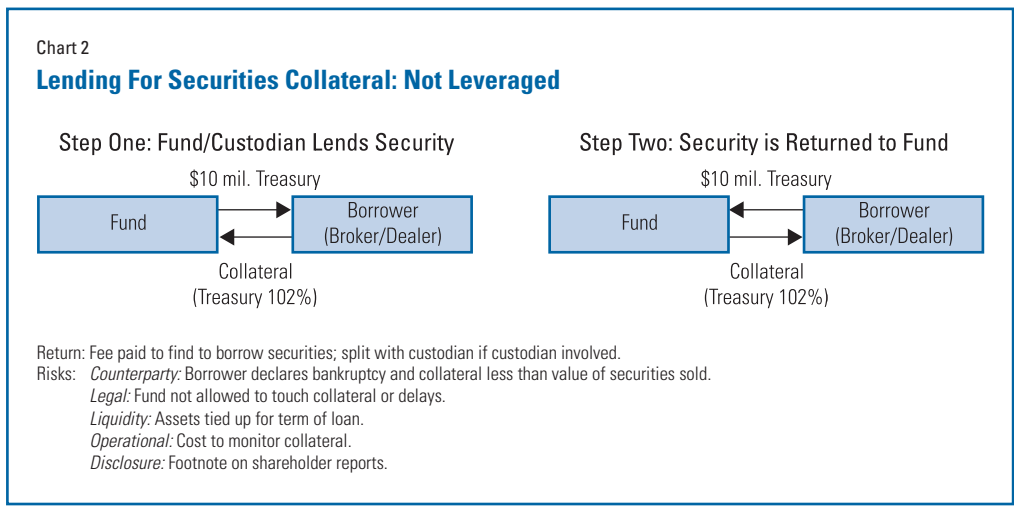
provide liquidity, rather than having to sell securities at an inopportune time.

Securities lending, an investment strategy used by money fund managers to enhance income (or to lower custody expenses), can also increase the risk level of a money fund portfolio via leverage. Fund custodians typically orchestrate the securities lending process, but some larger fund companies have in-house lending operations.

**Lending with securities as collateral: not leveraged**

Traditionally, securities lending was viewed as a low-risk strategy with which a fund manager (via the custodian) could simply focus on the

credit quality of the counterparty and the loan collateral. If a fund accepts securities as collateral, it encounters a different set of risks than it does if the fund accepts cash collateral (see chart 2). In the former case, the fund (usually via the custodian) lends securities for a fee to a broker/dealer (borrower) and requires securities as collateral. The dealer provides collateral, typically in the form of Treasuries, at 102% of the loaned securities' value, which is marked to market on a daily basis. When the loan terminates (often the next day), the broker returns the securities and the fund returns the collateral. If a custodian handles the operation, the fees are split



between the fund and the custodian. The major risks are that the borrower defaults or files for bankruptcy and/or that the price of the collateral drops to less than the value of the loaned securities.

#### Lending with cash as collateral: leveraged

Securities lending is viewed as a more aggressive strategy from an investment standpoint if cash collateral is accepted. The fund (via the custodian) lends out securities but accepts cash collateral instead of securities (*see chart 3*). The custodian invests the cash in securities with the aim of beating the cost of the loan and splitting the income with the fund. While the income is split between the fund and the custodian, the fund bears all risks of the assets. Regardless of whether the fund or

the custodian invests the cash collateral, the result is that the assets of the fund are increased—a leverage impact. This type of securities lending has a similar risk profile to reverse repos.

#### Reverse repurchase agreements and securities lending criteria

Standard & Poor's reverse repo and securities lending criteria take into account incremental risks associated with these strategies. The criteria focus primarily on the counterparty credit quality, the term of the transaction, and the effect that leverage has on a portfolio's WAM.

As with repos, Standard & Poor's views reverse repos and securities lending transactions as posing counterparty risk and requires

**Table 8 Impact Of Redemptions On Weighted Average Maturity Of A Levered Portfolio**

Redemption (%) gross	Effective leverage factor	Effects on WAM investment in overnight repo
0	1.25	60
5	1.27	64
10	1.29	69
15	1.31	74
20	1.33	80
25	1.36	82
30	1.40	84
35	1.44	87
40	1.50	90
45	1.57	94
50	1.67	100

Redemption (%) gross	Effective leverage factor	Effects on WAM investment in 30-day security
0	1.25	68
5	1.27	70
10	1.29	73
15	1.31	76
20	1.33	80
25	1.36	82
30	1.40	84
35	1.44	87
40	1.50	90
45	1.57	94
50	1.67	100

Assumptions: (1) Unlevered WAM portfolio is 60 days. (2) Initial portfolio was levered 25% of net assets. (3) Initial unlevered barbell portfolio is 50% 120-day Treasuries and 50% overnight repo. (4) Overnight repo is used to meet redemptions. (5) Effective leverage calculated immediately after redemption.

that the counterparties with which the fund engages in either reverse repo or securities lending has a short-term rating of either 'A-1' or 'A-1+' at the 'AAAm' or 'AAm' rating levels. As a general guideline, we view all investments made by the fund (related to reverse repos and securities lending) as assets of the fund. Therefore, a modified WAM is calculated. Standard & Poor's then applies its sensitivity matrix, as is done with all rated Principal Stability funds (*see table 8*).

Standard & Poor's also takes a conservative view when analyzing the structure and term of the overall transaction. All transactions should be "matched" on both sides. For example, cash from a reverse repo with a seven-day term should be invested in a security with a seven-day maturity. Additionally, at the 'AAAm' rating level, all transactions are limited to 30 days or less. Transactions with maturities of less than or equal to seven days should not exceed 25% of the net assets of the fund. Transactions with maturities that exceed seven days cannot be more than 10% of the net assets of the fund. Since the securities that are reversed or loaned out are tied up for the term of the transaction, we view these securities as illiquid for transactions beyond seven days.

Standard & Poor's is also concerned with incremental risks associated with purchasing agency variable-rate notes with borrowed monies (via reverse repos or securities lending). To limit the potential for mismatching maturities, Standard & Poor's feels it is inappropriate for highly rated funds to invest more than 10% of borrowings in VRNs. For example, a \$100 million portfolio that levers 25%, or \$25 million of net assets, should limit VRNs to 10%, or \$2.5 million, of the borrowed funds in VRNs. All VRN purchases should meet Standard & Poor's Principal Stability fund rating guidelines for VRNs.

The reverse repo and securities lending criteria recognize the incremental risks associated with these strategies and their effects on a fund's WAM. The following example will assist in understanding the effects that leverage can have on a fund's WAM. Assume an unlevered fund is comprised of a 60-day Treasury security, or a bullet portfolio with a WAM of 60 days. This \$100 million portfolio enters into a reverse repo, or lends 25% of its assets and

invests the proceeds in an overnight deposit. While this transaction is matched, Standard & Poor's also analyzes the reported effective WAM. If the overnight repo investment is included in the portfolio, the WAM (gross) could be reported as 48 days ( $[80\% \times 60 \text{ days}] + [20\% \times \text{one day}] = 48 \text{ days}$ ). However, because the increase in assets to \$125 million has a leverage effect, the WAM has to be calculated on a net basis, which is 60 days. To properly adjust the WAM, take the unlevered portfolio WAM of 60 days and add the WAM of the borrowed assets ( $60 + [25\% \times \text{one day}]$ ). If the fund invested in a 30-day security, the fund's effective WAM would be 68 days ( $60 + [25\% \times 30]$ ). Further, Standard & Poor's analyzed the impact of redemptions on the levered portfolios and found the WAM differences become even more significant. For example, the 60-day portfolio with 25% net leverage experiences a sharp rise in its effective WAM to 80 days following an immediate 20% redemption in assets (*see table 8*).

Standard & Poor's expects rated funds to provide the following information with regards to securities lending and reverse repo transactions on a weekly basis:

- Gross assets (market value basis) and net assets (market).
- Percentage of fund in reverse repo and/or securities lending transactions.
- All terms of transaction and identification of all securities reversed or out on loan. These include: name of security on loan/reversed, name of security (or cash) received, term of the loan (maturity), and percentage of net and gross assets.
- Investments from transactions included in portfolio holdings reports as fund assets.
- Weighted average portfolio maturity calculation adjusted for effects of leverage.

### Guaranteed Securities

If a rated fund invests in a security that possesses a guarantee from a rated third party, the rated guarantors should comply with Standard & Poor's credit criteria for the respective fund-rating category. We will also conduct a review of any guarantees to ensure they meet our minimum requirements for rated funds.

In reviewing these securities, some points of discussion may include:

- Whether the guaranty is absolute and unconditional;
- Whether the guaranty is a guaranty of payment and not of collection;
- Whether the guarantor agrees to pay the guaranteed obligations on the date due and waives demand, notice, marshalling of assets, etc.;
- Whether the guarantor's obligations are unconditional irrespective of the value, genuineness, validity, or enforceability of the underlying obligation and whether the guarantor waives all circumstance or conditions that would normally release a guarantor from its obligations;
- Whether the guarantor reinstates any guaranteed payment made by the primary obligor that is recaptured as a result of the primary obligor's bankruptcy or insolvency;
- Whether the guarantor waives its right to subrogation until the guaranteed obligations are paid in full;
- Whether the guarantor waives rights of set-off, counterclaim, etc.;
- Whether the guaranty is binding on successors of the guarantor;
- Whether the holders of the guaranteed obligations are explicit third-party beneficiaries of the guaranty;
- Whether the guaranty can be amended without the consent of the holders of the guaranteed obligations; and
- Whether the guarantor has subjected itself to jurisdiction and service of process in the jurisdiction in which the guaranty is to be performed.

Additionally, the inclusion of these securities in Standard & Poor's rated funds is based on an analysis of the fund's operating history, size, diversified shareholder base, asset diversification, cash-flow volatility, and, most importantly, management's ability to demonstrate its proficiency to manage the risk in these securities to maintain its rating.

### Interfund Lending

For U.S. fund management companies that have received exemptive orders from the SEC

to lend cash between funds (managed by the same investment adviser), we believe that fund managers should set prudent guidelines based on the size of the fund and the parties involved. We will evaluate the lending on a case-by-case basis and believe that adherence to the following guidelines is consistent with investment practices of highly rated funds. We look for the following:

- Opinion written by either in-house or external counsel for the fund evidencing that the fund lending cash has a lien on the borrowing funds' assets that is senior to that of fund shareholders and service providers (i.e. custodians, distributors, and investment advisers); and
  - Established guidelines that specify percentages that each rated fund may lend (to each fund and in aggregate) as well as the percentages that each borrowing fund may borrow.
- Additionally, rated funds should:
- Refrain from lending to funds with more than 35% emerging markets exposure;
  - Refrain from lending to funds that have lost greater than 25% of their assets within the past five business days (through any combination of redemptions and market depreciation);
  - Refrain from borrowing from other funds except to meet emergency liquidity needs (i.e. not to lever the fund or otherwise enhance yield);
  - Provide details on the amount of money loaned at any time during the prior week, the name of the borrowing fund(s), the net asset size of the borrowing fund(s), and the maturity and interest rate terms of the loan(s). Additionally, we request that rated funds provide written notification of these policies prior to commencement of any such transactions.

### Collateralized CDs

Prior to purchase and on a case-by-case basis, Standard & Poor's Principal Stability funds ratings criteria allow for limited exposure to collateralized CDs with nonrated (NR) banks or banks rated 'A-2' by Standard & Poor's based on such investments maintaining strict

diversification guidelines and prudent levels of overcollateralization. When evaluating funds that invest in collateralized CDs with nonrated banks, our criteria call for each CD to be collateralized at 105%-110% based on the maturity of the security and the pricing frequency, with U.S. Treasuries or government securities and limited to 0.25% per bank and the total exposure managed below 5%. When evaluating funds that invest in collateralized CDs with banks rated 'A-2' by Standard & Poor's, our criteria call for the deposits to mature in one day (daily liquidity) and be collateralized at 101% with U.S. Treasury Securities. The collateral must be priced at least weekly, the maximum exposure must be limited to 2.5% per bank, the bank's minimum long-term rating must be 'BBB' with a stable outlook, and the total exposure must be managed below 5%.

### Investing In Other Funds

Standard & Poor's Principal Stability fund ratings criteria call for rated funds that invest in other rated funds (also called Registered Investment Companies or RICs in the U.S.) to carry an identical rating. For example, a Standard & Poor's 'AAA' fund may only invest in Standard & Poor's 'AAA' funds. Funds registered under Rule 2a-7 are limited to a 10% investment in other Principal Stability Funds. Standard & Poor's Principal Stability Fund criteria for funds that are not registered under Rule 2a-7 (i.e. offshore funds, government investment pools, etc.) generally calls for a maximum 25% exposure to any one fund with no stated overall maximum exposure. Nevertheless, while no overall maximum is stated, we will inquire as to the feasibility of one rated fund investing a majority of its assets in other rated funds. This includes an analysis of the rated fund's position on fee rebates, since investing in another fund will ultimately cause the shareholder to be paying fees on two funds. In addition, we will review the percentage limits that the investing fund may comprise of the fund it is investing in, as it would not be prudent for the fund to invest in another rated fund if it were going to comprise a significant portion of its assets.

### Deposits With Foreign Bank Branches

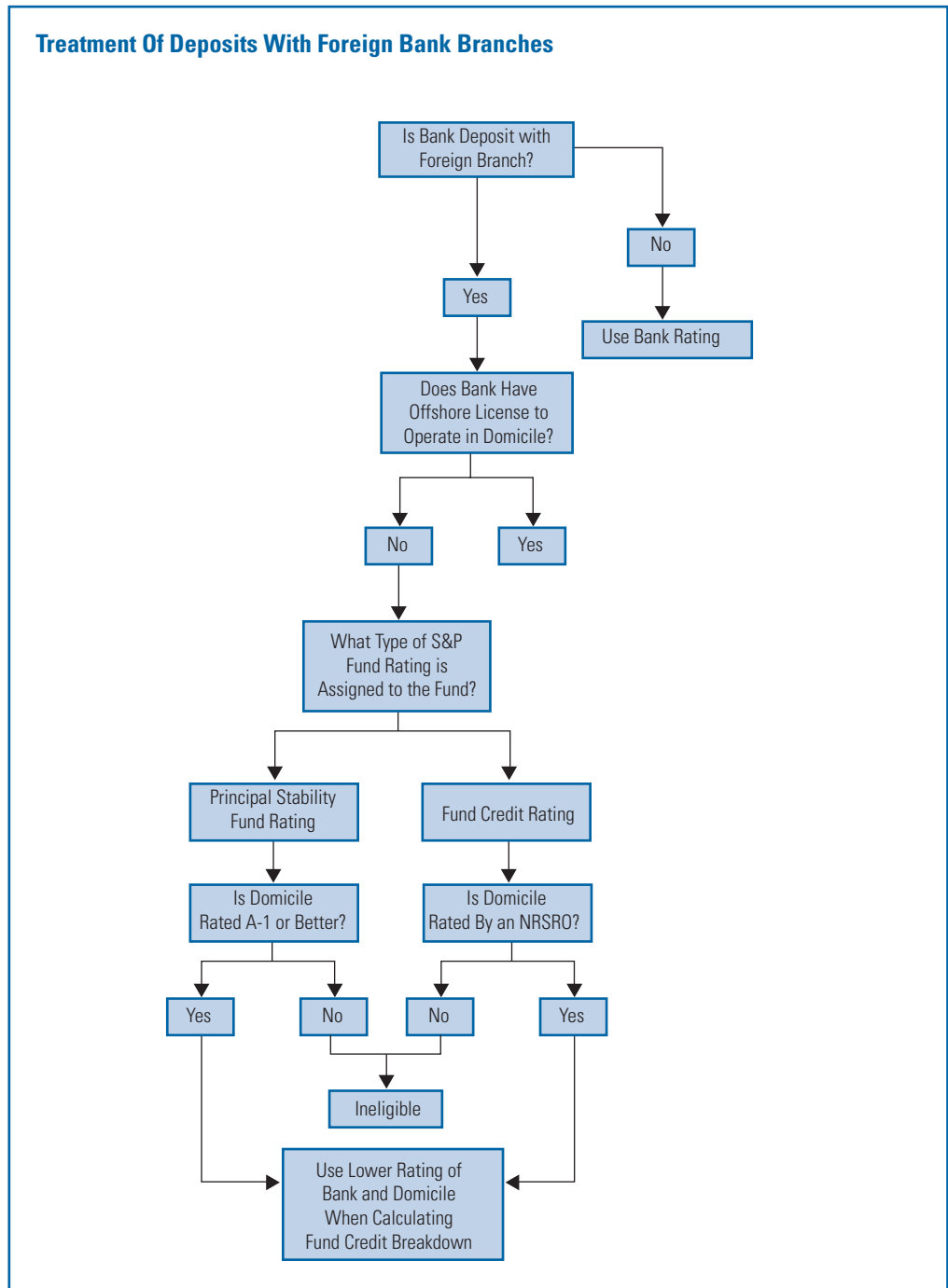
If a fund has exposure to bank obligations issued from a branch located outside the country of the rated issuer or counterparty (e.g., time deposits with a foreign branch), the sovereign risk posed by the host country must also be taken into consideration. Under corporate law, "a branch has no separate existence from the bank. However, branches are also subject to the laws of their host countries." Therefore a foreign sovereign government may affect the financial and operating environment of entities under its jurisdiction. In assessing the rating of these banks and their obligations our Financial Institutions Group considers many factors, one of which may be whether or not banks are subject to deposit freezes, debt payment moratoriums, and exchange controls that might directly prohibit their paying certain classes of liabilities. *(For more information on this topic see "Sovereign Risks and Bank Ratings" and "Sovereign Risk for Financial Institutions.")*

For the purposes of our Principal Stability Fund Ratings, bank deposits with a branch outside the parent bank's domicile should be with host sovereign countries that have a rating of at least 'A-1'. When calculating the fund's credit quality breakdown, the lower of the bank's and sovereign's ratings should be used. Obligations from a branch located in a host sovereign country that is rated below 'A-1' would be eligible if secured with a letter of guaranty by, or issued as a direct obligation of, a parent bank (issuer/counterparty) that we rate 'A-1' or 'A-1+'. An exception to this rule can be made when an offshore domicile permits banks to operate with an offshore bank license rather than a local bank license. For example, deposits in the Cayman Islands, Channel Islands, and Island of Man are situated so that U.K. law effectively governs them and money does not actually ever reside in the country in question and sovereign risk does not exist. The monetary/regulatory authorities for these domiciles regularly publish a list of banks on their websites that have obtained these offshore licenses. The latest lists can be found at a variety of sites including: [www.cimoney.com](http://www.cimoney.com), [www.gfsc.gg](http://www.gfsc.gg), and [www.gov.im](http://www.gov.im).

**Potential Limited Liquidity/ Illiquid Basket Securities**

The following is a discussion of the securities that are most often included in the 10% limited liquidity/illiquid basket. For a complete

list and a further explanation of the Standard & Poor's 10% limited liquidity/illiquid basket, please refer to "10% Limited Liquidity/ Illiquid Basket" in the "Market Price Exposure" section.



## Credit-Linked Notes (CLNs)

Credit-linked notes may present funds with limited liquidity as a result of their inherent credit leverage and their dependency on a specific broker for liquidity. Given these two potential risks, credit-linked notes held by rated money market funds should mature in 13 months or less and be limited to a maximum of 5% of a fund's total assets diversified by 1% per issue and 2% per sponsor/broker. Securities sponsored by a broker/dealer that are not CLNs will not count toward this 2% limit. It is also recommended that a money market fund take the most conservative route when applying its diversification guidelines by counting the exposure to the underlying credit of a CLN (i.e., reference entity) toward their issuer diversification guidelines. All CLNs must be included in the limited liquidity/illiquid basket unless they mature in seven days or less.

## Extendible Notes

Extendible notes come in many forms but can generally be classified under two broad categories based on who possesses the option to extend: the holder of the security or the issuer of the security. When comparing the two types, Standard & Poor's looks more favorably at those instruments where the holder of the securities possesses the option to extend because this option allows the holder to more actively manage the maturity risk associated with the issuer. However, for these extendible securities where the holder possesses the option, Standard & Poor's does not believe it is prudent for a fund to extend the maturity if the issuer experiences any credit deterioration, including being put on CreditWatch Negative or downgraded.

Extendible commercial notes (ECNs) where the issuer has the right to extend look very much like traditional CP, but provide a twist. Highly rated corporations issue ECNs for a finite period of time, say 90 days. They differ from CP in that the issuer, at its discretion, can extend the maturity of the note to a maximum of 390 days. The issuer has the option to call the notes at any time during the extension period. Like CP, ECNs are offered at a discount rate based on the initial

maturity date. If extended, the rate becomes variable based on a spread above LIBOR.

The size of this spread is dictated by the short-term credit rating of the issuer, and the spread's magnitude is designed to discourage the issuer from extending the maturity date. The benefit to the issuer is that they can issue ECNs without a backup liquidity facility. At the initial redemption date, if the issuer lacks the necessary funding to pay off the notes, it can simply extend the maturity until alternative funding is obtained.

Extension would occur when the issuer has no other viable refinancing options. This would be a precarious position for a stable NAV fund to be in, even though it receives a premium for accepting this risk. While the premium rate may seem attractive (i.e., 110% of LIBOR for 'A-1+' credits, 115% for 'A-1' credits), money funds could face liquidity and pricing problems. The fact that the issuer cannot place new CP into the market implies that the fund will have equal trouble finding buyers for its ECN position, rendering its holding illiquid. At this point, accurate pricing of the securities becomes complex, particularly given the issuer's option to call the ECNs at any time. Standard & Poor's believes that prior to purchasing these securities, money fund advisers should adopt a detailed investment policy for ECNs and be prepared to hold the securities to the extended maturity date.

For those securities where it is the issuer's option to extend the maturity, the following guidelines apply:

Extension of an ECN would only occur when an issuer experiences an adverse credit event, or if the market encountered a liquidity crunch. Therefore, if an extendible note where the issuer has the option to extend is not booked to the final maturity, Standard & Poor's Principal Stability fund criteria calls for rated money funds to book the maturity of ECNs to the initial redemption date and count them toward their 10% less liquid basket of securities. Short-term credit ratings on ECNs are treated the same as the issuer's CP ratings. (For Standard & Poor's Principal Stability fund ratings, CP issuers must be rated 'A-1' or better by Standard & Poor's). While it is considered unlikely that the issuer will extend the notes, upon extension, the

rates change from fixed to variable, and money funds should calculate maturity based on final maturity date. Although interest rates for ECNs reset periodically (typically monthly) after extension occurs, calculating days to maturity by referencing the reset date is imprudent. U.S. money fund regulation permits funds to calculate maturity for variable-rate securities based on the reset date. This applies only when the market value of securities can be reasonably expected to approximate amortized cost at each reset until final maturity. If an ECN extends, the ability to project the market value of the security is likely to be materially impaired.

For information and criteria on extendible asset-backed notes, please see “10% Limited Liquidity/Illiquid Basket” in the “Market Price Exposure” section.

### Funding Agreements

Funding agreements are investment contracts issued by insurance companies for the institutional marketplace. These investment contracts are popular with some money funds due to their attractive yields and put provisions. The put provision allows the owner of a funding agreement contract to receive back its investment in a specified number of days. Most money funds prefer short puts (i.e. seven or 30 days), although issuers have become reluctant in the past few years to issue funding agreements with short puts. Recently, the most common put maturities have been 180 days or one year. Floating-rate funding agreements are typically pegged to one- or three-month LIBOR, but Prime, CP composite index, and one-year constant maturity Treasury have also been used.

When evaluating funding agreements as eligible investments for Principal Stability fund ratings, Standard & Poor’s considers the credit quality of the issuer (insurance company), the terms of the agreement including contract maturity, reset index rate, and frequency of rate adjustments (i.e. weekly or quarterly), and any put or demand features. In order for the funding agreement to be an eligible investment for Standard & Poor’s rated stable NAV funds, the insurance company issuing

the investment contract must possess an ‘A-1’ or ‘A-1+’ short-term rating from Standard & Poor’s. In addition, contracts issued by a non-rated subsidiary of a rated insurance company are not eligible for rated stable NAV funds. As for the variable-rate features of the funding agreements, the reset rates should be tied to indices considered to be Principal Stability rates, such as LIBOR, Fed Funds, T-bill, and CP composite rates.

Standard & Poor’s also considers the potential for credit and liquidity risks presented by these contracts. Given the illiquid nature of short-term funding agreements (i.e. no secondary market trading), contracts that include short puts and demand features offer a greater level of protection against credit deterioration of the issuing company. To provide for liquidity in the event of credit action, some funding agreements include credit event put provisions, which provide the buyer (the fund) with the ability to put back the contract to the issuing entity upon a lowering of its rating. Standard & Poor’s views this feature favorably since it enhances the fund’s liquidity options. Therefore, any funding agreement with an unconditional one-day or seven-day put (or a security that is due to mature in seven days or less) can be excluded from the limited liquidity basket. All other funding agreements must be included in the 10% limited liquidity/illiquid basket.

Since floating-rate funding agreements pay a variable rate of interest on periodic reset dates, U.S. money market funds can take advantage of the maturity shortening provision under Rule 2a-7. Hence, funding agreements with a one-year maturity and 30-day reset dates are treated as 30-day instruments by Principal Stability funds for purposes of calculating their average portfolio maturity. However, these securities are considered to be part of the 10% illiquid basket as per Rule 2a-7.

### Master Notes And Promissory Notes

Master and promissory notes are attractive alternative investment vehicles for Principal Stability funds as they are highly customizable. The investor can select the floating-rate reset, the underlying index of the reset rate, and the

maturity date(s). The investor can also vary the principal amount, alter the pricing index, and establish a put option for early maturity of the notes.

Master notes can be secured or unsecured demand notes and an investor can invest varying amounts of money at different (fixed or floating) rates of interest pursuant to arrangements with issuers. The interest rate on a master note can be fixed, based on or tied to changes in specified interest rates, or reset periodically according to a prescribed formula. Although there is no secondary market for master notes, those with demand features can provide the investor, or the fund, with liquidity (usually with relatively short notice).

Promissory notes can be secured or unsecured notes issued by corporate entities to finance short-term credit needs or operating expenditures or to retire debt. In return for the loan, companies agree to pay investors a fixed return over a set period of time. While most promissory notes are registered with the SEC and with the states in which they are sold, notes with maturities of nine months or less may be exempt from registration requirements.

Standard & Poor's Principal Stability fund rating criteria for promissory notes and master notes call for these notes to be issued by an issuer that has an explicit issuer rating or a counterparty rating of 'A-1+' or 'A-1' from Standard & Poor's. Eligible master notes or promissory notes that are not issued by a rated entity may be secured by a letter of guaranty from a parent company rated 'A-1' or 'A-1+' by Standard & Poor's.

While a majority of promissory and master notes are issued by rated issuers, some master and promissory notes are issued by unrated subsidiaries of Standard & Poor's rated entities. A comprehensive review of the ratings correlation between parent companies and their subsidiaries indicates that there is often a disparity in the credit ratings, or the creditworthiness, between a parent company and its subsidiaries. The disparity in the ratings between a parent company and its subsidiaries can be attributed to the subsidiary's domicile, regulatory environment, or the importance of the subsidiary to the parent company. Given

that creditworthiness of a stable NAV fund's investments is a key element in its ability to maintain principal value and limit exposure to loss, Standard & Poor's criteria for highly rated funds require these notes to possess an explicit rating. Due to the inherent nature of these securities, unless they possess a one-day or seven-day unconditional put, they must be included in the 10% limited liquidity/illiquid basket.

### Collateralized Debt Obligations

While the market for CDO paper is continuously developing, there are currently three categories of money market fund eligible securities associated with CDOs. Each of these types of money market eligible securities related to CDOs may have variations in structure, enhancement levels, and/or liquidity facilities that affect their treatment in money market funds that we rate. The three categories are:

- CP of Cashflow CDOs;
- Money Market Tranches of CDOs; and
- ABCP Conduits investing in senior tranches of CDOs.

#### CP of cashflow CDOs

Cashflow CDOs are essentially structured vehicles that issue different tranches of liabilities to fund the purchase of a pool of assets. Since CP issued from CDOs shares traits of both ABCP conduits and traditional cashflow CDOs, we looked at the similarities and differences of these securities to determine how they should be treated in rated money market funds. CP issued from CDOs generally has bullet maturities ranging from one to 270 days, is covered 100% by a third-party liquidity facility, and now has tranche sizes typically at \$900 million or more. These securities are issued on a continuous basis and are also called ABCP of CDOs or super senior tranches of CDOs. Based on the similarities with traditional ABCP programs, CP of CDOs backed by 100% third-party liquidity support, and absent an extension feature or delayed draw, is excluded from our limited liquidity/illiquid basket. In cases where CP of CDOs have an extension feature or delayed draw feature (e.g., of two to three days),

these securities can be excluded from the limited liquidity/illiquid basket if they are booked to the legal final (put/extension) maturity date.

#### Money market tranches of cashflow CDOs

These money market tranches are listed in a variety of ways, for example Class A-I MM, Class A-1, etc., and have slightly different characteristics than CP of CDOs. These short-term notes may have longer legal final maturities, coinciding with the payment dates of the collateral, and are typically tied to remarketing put mechanisms that allow them to be money market eligible. Nevertheless, these remarketing puts are generally tied to extension options where payment does not have to be met on the expected maturity, but rather after an extended remarketing period—in some cases after another six months. Based on these characteristics, Money Market Tranches of CDOs are counted toward our limited liquidity/illiquid basket unless they are booked to their legal final maturity date or if the liquidity facility offers full third-party committed support without extension risk.

#### ABCP single seller conduits investing in senior tranches of CDOs

The most common form of CP seen in rated prime/CP money market funds continues to be securities issued out of traditional ABCP conduits. In addition to programs purchasing receivables generated from trade, credit card, auto loans, auto, mortgages, etc., some single-seller programs have been established for the sole purpose of financing senior tranches of

CDOs. In certain instances, the liquidity support of these ABCP conduits relies on the same remarketing put mechanism seen in some money market tranches of CDOs. Of these single seller programs solely invested in CDOs, those that rely on a remarketing put instead of traditional liquidity support are counted toward our limited liquidity/illiquid basket unless they are booked to their legal final maturity date.

Liquidity risk is paramount in the analysis to determine whether or not principal stability can be maintained. When reviewing the liquidity and specific risk of these products we examined the overall size of the market, number of dealers, program/tranche sizes, tenure in the market, liquidity facilities, and disclosure/transparency of underlying collateral. Our conclusions on the treatment of these securities in our rated funds is based on this analysis, as well as on extensive discussions with fund managers, credit/risk analysts, dealers, issuers of structured programs, and members of the Standard & Poor's Structured Finance Group. We expect all money market CDOs purchased or held by rated funds to have a current rating of 'A-1' or 'A-1+' by Standard & Poor's. Fund rating analysis and surveillance relies in part on the due diligence and ratings analysis conducted by our Structured Finance group. The structured ratings process for these securities includes a detailed review of the CDO's structural elements, credit enhancement levels, interest rate risk mitigants, liquidity provider, support levels, issuance tests, funding operations, the collateral manager, and more. ■

# Tax-Exempt Money Market Funds

In addition to analyzing taxable money funds, Standard & Poor's Ratings Services analyzes tax-exempt or municipal money market funds that invest primarily in short-term municipal securities. In assigning ratings to tax-exempt money market funds, our analytical scope factors in all Nationally Recognized Statistical Rating Organization (NRSRO) ratings assigned to individual securities. This policy allows us to take a broad-based portfolio approach in analyzing all tax-exempt funds.

To rate tax-exempt money market funds that hold securities that we have not rated, we must be able to assess the funds' credit evaluation methods. Therefore, in conjunction with all ratings assigned to tax-exempt funds, we conduct a detailed review of each fund's credit analysis approach. This entails meeting with each fund's credit research staff to examine its analytical practices, procedures, and methodologies.

The analysis covers the following:

- Security evaluation;
- Market analysis;
- Security selection;
- Asset dispersion;
- Diversification;
- Pricing;
- Ongoing monitoring of credits;
- Sources of secondary market information;
- Response to distressed credit situations; and
- Dedicated resources and staff qualifications.

Discussions focus on the use of NRSRO ratings, assessments and any internal rating systems, and the process in which each fund's

approved list of securities is presented and reviewed by the fund's board of directors.

Our ratings guidelines state that for a tax-exempt fund to be rated in our highest categories, all securities held by the fund should be rated either 'SP-1+' or 'A-1+' or 'SP-1' or 'A-1' or deemed equivalent by Standard & Poor's. The proportions for each rating depend on the fund's rating category; for example, all 'AAAm' rated funds should carry a minimum of 50% in 'A-1+' or equivalent securities and a maximum of 50% of 'A-1' or equivalent securities.

We have specific criteria for assessing securities rated by other NRSROs. We may haircut ratings by other NRSROs based on where each security would likely be classified under Standard & Poor's rating scale. In most cases, such a haircut would involve a drop by no more than one rating category. Nevertheless, in some sectors where we believe other NRSROs diverge significantly from our rating approach, haircuts may be more than one category. Generally, we will classify securities as lesser quality if:

- The security is within a sector or category of municipal securities where there tends to be material differences in the ratings assigned to like securities by the various NRSROs, or
- The security is within a sector or category of municipal securities in which the NRSRO(s) rating the security has limited market presence.

While unrated securities are typically assessed on a case-by-case basis, we have recently developed criteria to allow for some exposure of “nonrated” credit or liquidity enhanced securities. Please see the following section titled “Nonrated Credit or Liquidity Enhanced VRDN Policy” for more details on this process.

In considering other rating scales, we make the following distinctions:

- Securities not rated by Standard & Poor’s that have been assigned the highest short-term rating by another NRSRO and have a long-term rating comparable to Standard & Poor’s ‘AAA’ are considered our ‘A-1+’ equivalent for Principal Stability Rating purposes only.
- Securities not rated by Standard & Poor’s that have been assigned the highest short-term rating by another NRSRO and have a long-term rating comparable to Standard & Poor’s ‘AA’ are considered our ‘A-1’ equivalent for Principal Stability Rating purposes only.
- Securities not rated by Standard & Poor’s that have been assigned the highest short-term rating by another NRSRO and possess credit support from an entity rated ‘A-1+’ by Standard & Poor’s are considered our ‘A-1+’ equivalent for Principal Stability Rating purposes only.
- Securities not rated by Standard & Poor’s that have been assigned the highest short-term rating by another NRSRO and possess credit support from an entity rated ‘A-1’ by Standard & Poor’s are considered our ‘A-1’ equivalent for Principal Stability Rating purposes only.

Please refer to the “Municipal Securities Assessment Flowchart” for more details.

The criteria serve as recommended guidelines for rating tax-exempt funds. In assigning actual ratings, we base our final analytical determina-

tion on our review of each fund’s portfolio management and credit research areas.

### Nonrated Credit Or Liquidity Enhanced VRDN Policy

In the past, securities that were not rated by any NRSRO and only possessed a credit or liquidity enhancement were generally not considered to be consistent with our ‘AAAm’ tax-exempt Principal Stability Rating criteria because these securities did not undergo a structural review by any NRSRO. We formalized a policy for making exceptions to this rule to allow for some exposures (typically up to 10% but may vary based on maturity of securities) to non-rated securities in our ‘AAAm’ rated tax-exempt money market funds if all of the following conditions are met:

- The nonrated security possesses a credit and/or liquidity enhancement from an institution rated ‘A-1’ or better by Standard & Poor’s;
- The investment manager (advisor) undergoes a detailed review of its credit research and analysis policies as it relates to nonrated issues.

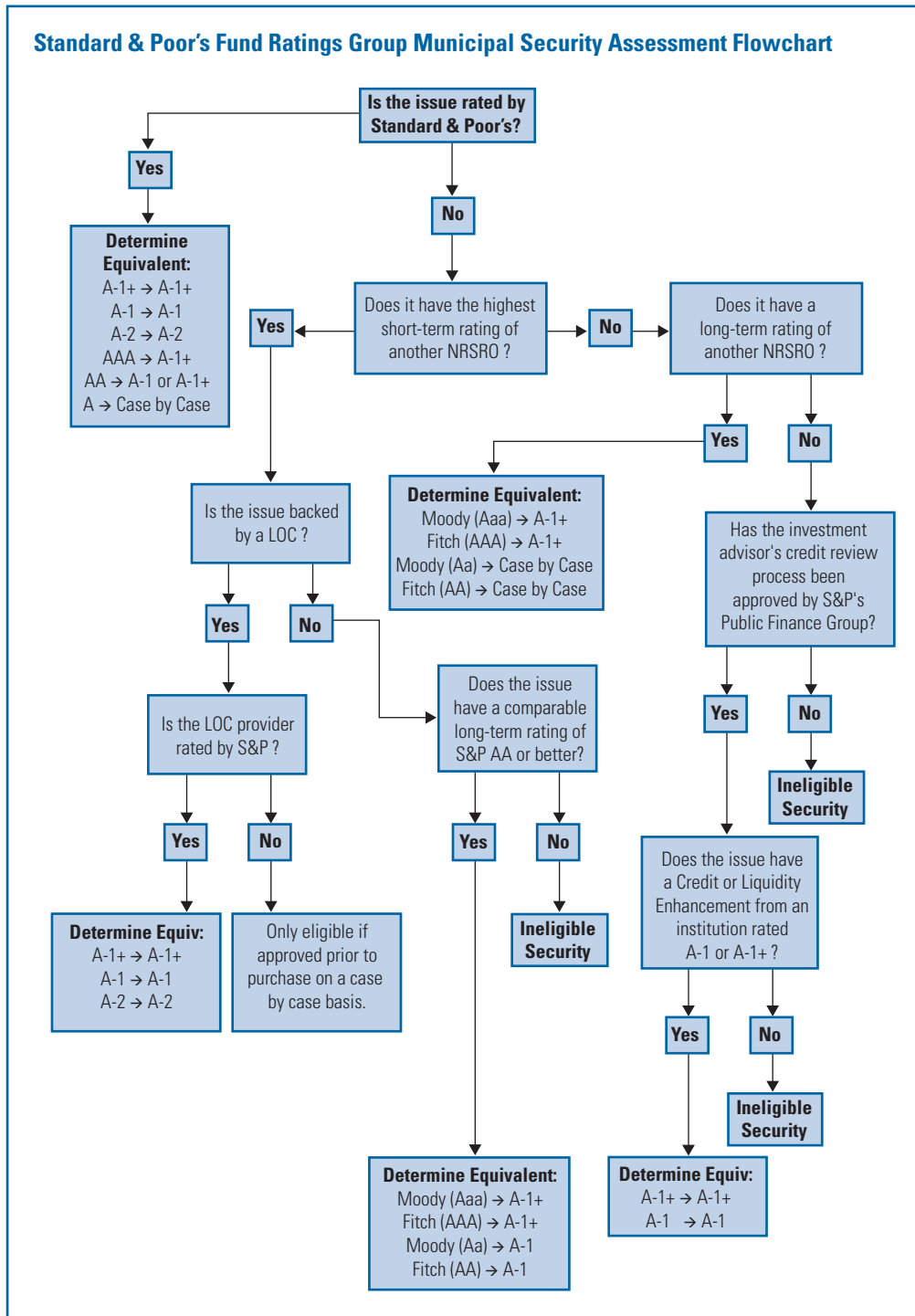
This additional assessment will be implemented upon request by the investment advisor. The review will focus on an array of issues surrounding the structures and their legal documentation. The review may include, but is not limited to, the following topics:

- Letter of Credit Analysis or Liquidity Facility Analysis (depending on the type of structure);
- Bankruptcy analysis;
- Preference proofed monies;
- Payment events;
- Required bondholder takeouts (mandatory tenders, redemptions, and acceleration);
- Bank facility drawing instructions;
- Bank document termination events;
- Reimbursement provisions; and
- Miscellaneous.

For a more expansive discussion regarding the analysis, please refer to the criteria articles entitled “Public Finance Criteria: LOC Backed Municipal Debt” and “Public Finance Criteria: Bank Liquidity Facilities”, published on RatingsDirect on Oct. 13, 2006, and

Oct. 20, 2006, respectively. Additionally, the inclusion of these securities in our rated funds is based on our analysis of the fund's operating history, size, diversified shareholder base, asset diversification, cash-flow volatility, and

most importantly, management's ability to demonstrate its proficiency to manage the risk inherent in these securities to maintain their Standard & Poor's rating. ■



# Principal Stability Fund Ratings Criteria For Offshore And European Money Market Funds

The following specific criterion applies to Offshore and European registered Principal Stability funds, or funds that are not subject to SEC's rule 2a-7.

## Maturity Of Investments/ Offshore And European Funds

The remaining term to maturity of investments should not exceed 397 days. Nevertheless, exceptions can be permitted for securities with floating or variable rates, and for floating-rate ABS. See the criteria below for details.

## Limited Liquidity Concerns For Offshore And European Funds

Standard & Poor's Ratings Services' Principal Stability Fund Ratings Criteria calls for highly rated funds to maintain at least 90% of their assets in highly liquid money market instruments, thus limiting limited liquidity/illiquid securities to no more than 10% of a fund's holdings. In addition to the list of security types specified in the Limited Liquidity/Illiquid Basket section of our principal stability ratings criteria, securities denominated in currencies other than a fund's base currency and swapped back into the base currency of the fund, and time deposits exceeding seven days to maturity are also considered to possess limited liquidity and should be considered part of the 10% limited liquidity basket. Deposits greater than seven days that possess an option by the holder to "break the deposit" without a penalty or additional cost every seven days or less, may be excluded from the 10% limited liquidity basket.

## Diversification Of Offshore And European Funds

Fund diversification guidelines call for no more than 25% per issuer for securities maturing in one day (collateralized overnight repurchase agreements with 'A-1+' rated dealers are permitted up to 40%, 10% per issuer for securities maturing in seven days or less, and 5% per issuer for securities maturing in more than seven days). Maximum aggregate exposure to any one issuer is limited to 25%; for example, if a company invests 5% in CP of Issuer A, the maximum amount of overnight investments with that issuer is 20%. These guidelines apply to overnight time deposits as well.

Diversification restrictions may be adjusted for funds operating in developing money markets or those with small asset bases that reduce the maturity of these investments, and rely on the highest quality names (A-1+). OECD government issuers rated 'A-1+' by Standard & Poor's are excluded from the diversification condition, although in the case of single OECD issuers, diversification of issues should be included.

## Floating/Variable Rate Securities/Offshore And European Funds

The maximum final maturity of any floating and variable-rate securities held by a 'AAAm'

rated fund is limited to no more than 397 days. Nevertheless, sovereign issues rated 'AA' or better, maturing up to two years (762 days) from time of purchase, are eligible for highly rated funds. We may also consider floating-rate notes (FRNs)/variable-rate notes (VRNs) for issuers other than 'AA' rated sovereigns with final maturity greater than 397 days but no more than two years (762 days) to be eligible on a case-by-case basis. All such FRNs/VRNs must possess a Standard & Poor's short-term rating of 'A-1+'. If the issuer does not possess a short-term rating, a Standard & Poor's long-term rating of 'AA' or better is required. A fund's total holdings of all such VRNs is limited to no more than 5% per issuer and no more than 10% of net assets of the fund. This 10% limit for those floating rate/VRN securities maturing in greater than 397 days but less than two years is separate from the limited liquidity/illiquid basket described above.

These investments should be publicly issued (not privately placed) liquid issues (i.e. with established secondary market activity and readily available and accurate pricing). We will consider the extension of the maturity range of VRN holdings for rated funds based on the fund's ability to maintain ample liquidity and will consider the fund's total asset size, diversification of the shareholder base, types and liquidity of other assets held by the fund, and the fund manager's ability to perform initial and ongoing credit risk analysis on the securities in question.

Additionally, we have developed the following criteria for floating-rate ABS.

#### Floating-rate credit cards ABS

Our criteria enable rated money market funds to invest in certain credit card ABS with scheduled maturity dates of two years (762 days) or less as outlined below. While there is extension risk present in these securities, the risk of extension is remote. Managers of rated funds must be able to evaluate the risk of extension and analyze the credit-spread duration of the extended notes and manage these risks within the spirit of Standard & Poor's Principal Stability Fund Rating Criteria. Eligible floating-rate

credit card ABS must meet all of the following characteristics:

- Issued by prime master trust programs;
- Rated 'AAA' by Standard & Poor's and not currently on CreditWatch;
- Maximum scheduled maturity\* of two years (762 days);
- Maximum 5% per issuer;
- Maximum 5% per servicer;
- If expected maturity is beyond 397 days, these holdings should be counted toward the 10% limit for 397-day to two-year (762 days) FRN basket; and
- If the issue goes into amortization or if the performance of the underlying assets deteriorates, indicating a higher probability of amortization, these holdings should be counted toward the limited liquidity basket and the 10% limit for the 397-day to two-year FRN basket.

\*Scheduled maturity (also called expected maturity) refers to the date written into the documentation of the credit card transaction; failure to repay principal in full by this date triggers amortization of the securities. Note, however, that nomenclature may vary from transaction to transaction.

#### Floating-rate auto ABS

Floating-rate auto ABS securities eligible for purchase in a highly rated Standard & Poor's money market fund must meet all of the characteristics outlined below. As with floating-rate credit card ABS, managers of Standard & Poor's-rated funds must be able to evaluate the risks associated with these securities and demonstrate their ability to manage these risks within the spirit of Standard & Poor's Principal Stability Fund Rating Criteria.

- Issued by U.S. ABS prime auto programs;
- Rated 'AAA' by Standard & Poor's and not currently on CreditWatch;
- Maximum "legal" final maturity of two years (762 days);
- Maximum 2.5% per issue/tranche;
- Maximum 5% per issuer;
- Maximum 5% per servicer;
- If legal final maturity is beyond 397 days, these holdings should be counted toward the 10% limit for 397-day to two-year (762-day) FRN basket; and

- Any exposure must be accounted for under the limited liquidity basket.

Please note that for auto ABS, “scheduled” maturity guidelines similar to those outlined for credit card ABS may be considered for approval on a case-by-case basis if the auto ABS program is set up as a master trust-type structure and other program structural characteristics have been reviewed (see comments under “Other ABS asset classes,” below). European auto loan ABS may also be considered, but only on a case-by-case basis. European auto loan ABS are not as homogeneous an asset class as U.S. auto loan ABS and transactions may have structural variations such as master trust structures, the inclusion of auto leases, or longer maturity guidelines for eligible loans.

#### Other ABS asset classes

We are comfortable extending the criteria to allow prime credit card master trust transactions, partly because of the availability of statistics on pools of credit card receivables over the significant time period from which the first credit card transactions were issued. The analysis indicates that consistently high monthly repayment rates coupled with the structural features such as amortization triggers will keep the extension risk of eligible credit card securities within acceptable limits. Securities in certain other ABS asset classes may also have scheduled or expected maturity dates shorter than two years, but legal final maturity dates beyond two years. Nevertheless, it is unlikely that we will be able to consider such securities for inclusion in rated money market funds unless there are reliable statistics on the underlying receivables during a significant period of time. In addition, the receivables should have repayment rates consistent with the short investment horizon of money market funds, and the securities should be structured in a way that limits extension risk. Lastly, all foreign floating-rate bonds should be publicly (not privately) placed liquid issues (i.e., established secondary market), and each fund should limit its exposure to the total amount of the outstanding issue.

#### Accumulating Net Asset Value (NAV) Funds

Like \$1.00 per share NAV or principal stability ratings, Standard & Poor’s accumulating NAV principal stability ratings address a fund’s capacity to maintain principal stability and the fund’s ability to limit exposure to principal losses due to credit, market, and/or liquidity risks.

In monitoring an accumulating fund’s NAV, we review the daily published share price of each rated fund to make sure that the NAV is constantly increasing and that if there is a decrease, it does not deviate more than the following percentages from its highest point: ‘AAAm’, 0.15%; ‘AAm’, 0.20%; ‘Am’, 0.25%; and ‘BBBm’, 0.30%. If a fund’s share price deviates beyond the amounts listed above, we will ask the fund for a daily pricing/marketed-to-market NAV calculation. It is important to note Standard & Poor’s principal stability rating on an accumulating NAV fund does not address decreases in NAV due to periodic distribution of accrued income.

In addition to receiving the daily-published share price, we request a weekly calculation of the value of assets in the fund, calculated on a marked-to-market value basis rather than an amortized cost basis. This calculation is an important element of the surveillance as this allows us to monitor the ability of the fund to repay investor’s original capital, while continuing to offer yield independently. Many money-market funds in Europe accumulate rather than distribute interest, and we therefore monitor the funds’ ability to maintain a continually increasing unit price. As such, we ask all rated accumulating NAV funds to calculate an equivalent stable share value (i.e. 1.00) by dividing net assets calculated on a marked-to-market value basis by net assets calculated on an amortized cost basis and express this figure to five decimal places.

#### Custodian

Generally, a rated fund’s custodian should be rated at least ‘A-2’ by Standard & Poor’s or be deemed equivalent to ‘A-2’ in consultation with Standard & Poor’s fund analysts. Nevertheless, if the legal and regulatory

framework for a domicile where assets held by a custodian of rated funds proves for clear segregation and protection of all fund assets, with quick and timely retrieval of those assets in the event of the custodial bank insolvency, then a lower minimum rating requirement may be acceptable for the

custodial bank. Domiciles that have sufficient legal and regulatory framework in place to provide for the safety of assets held with custodians include, for example: Australia, Bermuda, Cayman Islands, Channel Islands, Ireland, Japan, Luxembourg, Mexico, the U.K., and the U.S. ■

## Fund Credit Quality Rating Criteria

A Standard & Poor's Ratings Services fund credit quality rating captures a fund's overall exposure to default risk. When assigning a credit quality rating, we evaluate the fund's portfolio credit risk and conduct a qualitative assessment of fund management's credit procedures. Fund credit quality ratings are based on a credit matrix approach derived from our historical default and ratings transition studies, and a detailed examination of both a fund's management and its credit analysis. Our fund credit quality criteria call for the assets of a fund and its counterparties to be consistent with the fund credit quality rating.

The assessment is based on the credit quality and/or ratings of the investments held by the fund, as well as the credit quality of the counterparties with which the fund engages in market transactions such as swaps or repurchase agreements. To evaluate a fund's overall level of protection against losses associated with credit risk, we apply the factors and scores from the fund credit quality matrix table to the fund's portfolio holdings. These credit factors and fund credit quality ('f' subscript) scores are derived from our historical ratings stability and ratings transition studies. The credit factor for each of the long-term rating categories (e.g., 'AAA,' 'AA,' 'BBB') were derived from the singular, discrete, worst-case one-year default rates from 1981 through 2006. The matrix is essentially a set of credit factors for each rating category (e.g., 'AAA,' 'AA,' 'BBB') and a set of credit scores for each of the 'f' fund credit quality

ratings categories [full categories and + (plus) and - (minus) categories]. To calculate a fund's credit score, the credit factors are applied to (multiplied by) the aggregated percentage of securities held in each rating category. The sum of the products results in the overall fund credit quality.

Maturity buckets were created for the factors of "long-term" securities, and securities maturing in one year or less. The factors for short-term rating categories were also added to the credit matrix. The credit factors for each maturity bucket range from less than 90 days, 90 days to 365 days, and greater than 365 days, and recognize that the probability of default decreases as a security nears maturity.

For ABS/MBS securities in the credit matrix, we allow the use of the three-month average weighted average life (WAL; as per the YT screen on Bloomberg) to determine the appropriate maturity bucket in the

matrix. For example, if the Bloomberg three-month average WAL on a 'AAA' security is 0.23 years, it should be placed in the "less than or equal to 90 days" bucket for 'AAA' securities on the matrix as  $0.23 \text{ years} * 365 \text{ days} = 83.95 \text{ days}$ . For new securities, the Bloomberg WAL used to price that deal should be used until a three-month average is available.

This policy was created so that it can be consistently applied among all rated funds. We understand from our research that Bloomberg's WAL is most consistent for credit cards, autos, and CMBS, and that there is more room for managers' discretion when calculating the WAL for other mortgage related securities (pass-through MBS, Home Equity Loans, CMOs, and Manufactured Housing). Given this, Standard & Poor's Fund Rating analysts will review the systems each manager relies upon to track the cash flows and prepayment speeds of these securities when determining their WAL.

Fund credit quality ratings are different from the traditional credit ratings (e.g., issuer credit ratings) that we assign to bonds or debt issued by a corporation or issuer. The fund credit quality rating does not address a fund's ability to meet "payment obligations." Since our fund credit quality ratings only address the potential for principal losses due to credit defaults, defaulted securities should be excluded from the credit matrix calculation. (See *Appendix: Standard & Poor's Fund Credit Quality Rating Matrix* page 74)

### Qualitative Credit Overlay Process

A fund's credit quality matrix score is only part of the credit quality rating equation. We also conduct face-to-face review meetings with fund management focusing on its internal credit analysis, security evaluation process, and ongoing security surveillance procedures. Once a credit score is derived from the matrix, we conduct a meeting with the fund's credit staff to examine the depth and quality of their analysis, and consistency of the approach to understand the manager's credit risk tolerance. The goals are to review the suitability of the organization's structure to

meet their credit objectives; to examine their credit policies as to purpose, focus, and consistency; and to review the credit approval and surveillance process for effectiveness of policy implementation, consistency of analysis, and independence. The rating of funds managed by exceptionally strong teams may be enhanced to reflect the strength of the manager's overall credit analysis. Managers who are viewed to have particularly strong credit function will be eligible for a rating upgrade. This can take on either of two forms: the fund rating may be raised by one rating category, e.g., 'AAf+' from 'AAf'; or the manager may wish to retain the current rating and have the maximum credit score increased for the existing rating. These upgrades are granted on a case-by-case basis after a comprehensive review of the investment advisor's credit analysis and process.

### Counterparty Criteria

We have established minimum credit quality guidelines for counterparties that engage in market transactions with credit-rated and volatility-rated funds. These market transactions may include, but are not limited to, repurchase agreements (repos), reverse repos, forward purchases, forward exchange contracts, swaps, and other hedging positions. A counterparty's failure to meet its obligations, which are contracted with the fund, may impair the successful outcome of its intended objectives. Due to this risk, our criteria calls for a counterparty's minimum rating to be no less than one full rating category below the fund's rating for transactions spanning one year or longer. For example, 'AAAf' rated funds would need to use 'AA' or better-rated entities for transactions equal to or greater than one year. Counterparty criteria for all rating categories are as follows:

'AAAf'—long-term transactions (e.g., one year or longer): 'AA' or better. Short-term (e.g., less than one year): 'A-2' or better for overnight transactions; 'A-1' or better for longer than overnight.

'AAf'—long-term transactions (i.e., one year or longer): 'A' or better. Short-term (i.e., less than one year): 'A-2' or better for

overnight transactions; ‘A-1’ or better for longer than overnight.

‘Af’—long-term transactions (i.e., one year or longer): ‘BBB’ or better. Short-term (i.e., less than one year): ‘A-2’ or better.

‘BBBf’—long-term transactions (one year or longer): ‘BBB’ or better. Short-term (i.e., less than one year): ‘A-3’ or better.

### Global Policy For The Treatment Of Non-Standard & Poor’s Rated Issues In Rated Bond Funds

Since fund credit ratings reflect our opinion regarding the level of protection a fund provides against default, we must be able to assess the creditworthiness or credit exposure of all securities held by a rated fund. Securities that are not rated by us fall into two categories: securities that are rated by another nationally recognized statistical rating agency (NRSRO) and securities that are not rated by any NRSRO. We look at these two cases independently of each another.

Securities that are not rated by any rating agency must obtain a credit assessment from us and be deemed eligible on an individual case-by-case basis. Securities rated by other rating agencies, but not by us, are typically “notched down” or “haircut” for purposes of the credit matrix score. This haircut recognizes that ratings assigned by other rating agencies often diverge by up to one full rating category. Securities that are rated by NRSROs, but not rated by us, may be considered eligible if there is an analytic basis for considering these securities as having comparable credit quality. In conjunction with this analysis, we will conduct a detailed review of each fund’s internal credit analysis, security evaluation, asset selection, and credit surveillance procedures. For managers with the adequate-to-strong credit analysis, securities that are not rated by us may be subject to a one-rating category haircut with the following provisions (see “Fund Credit Ratings Flowchart for Treatment of Fixed-Income Securities Not Rated by Standard & Poor’s” on pg 60).

Structured Finance securities that are not rated by us, but are rated by another NRSRO are haircut by three notches (or one full rating

category) for purposes of the credit fund matrix to determine the fund’s credit score. If the security is rated by two NRSROs, the haircut is applied from the lower of the two ratings. The only exception to this would be for investment-grade Structured Finance securities (ABS, MBS, etc.) that are rated by two NRSROs; these securities are subject to a haircut of two notches. Any specialty Structured Finance security such as stadium finance, project finance, future flow issues, and asset types listed below must be evaluated by us on a case-by-case basis to determine the appropriate haircut, given the securities credit risk.

Non-Structured Finance securities not rated by us that are rated by one NRSRO are subject to a three-notch adjustment (or one full rating category) for input into the fund credit matrix. If the security is rated by two NRSROs, the following haircut applies from the lower of the two: one notch for investment-grade bonds and two notches for noninvestment-grade bonds.

Total exposure to securities subject to haircutting in a rated bond fund should generally not exceed 25% with no more than 5% in any one issuer; however, the qualitative overlay assessment may allow for more flexible or restrictive limits depending on the analysis.

The following asset types must be reviewed by Standard & Poor’s to determine the creditworthiness and credit factors on a case-by-case basis:

- Non-U.S. Structured Finance securities;
- Guaranteed securities;
- CDOs of Structured Finance and real estate securities;
- CBOs of CDOs;
- CLOs of distressed debt;
- Mutual fund fee securities;
- Catastrophe bonds;
- First-loss tranches of any securitization;
- Synthetics;
- Synthetic CBOs;
- Re-REMICs;
- Market value CDOs;
- Net interest margin securities.

#### Treatment of collateralized CDs

If a fund invests in nonrated CDs, the following criteria apply:

- Maximum of 10% of the portfolio;

- Collateral must be priced weekly;
- Collateral must be held in the name of the fund with the custodian.

Depending on the collateral type, the following applies:

- For U.S. Treasury or Agency collateral with a maximum final maturity of five years, only 100% collateralization is required;
- All other collateral that is not a U.S. Treasury or Agency security with a maximum maturity of five years must be rated at 'AA' by Standard & Poor's and be overcollateralized at 105%.

### Funds Investing In Money Market And Bond Funds

We recognize that short duration or enhanced cash vehicles may use money market and bond funds to invest short-term assets for liq-

uidity. As a result, we have established the following guidelines for funds investing in other funds:

If the money market fund is rated 'Am' or better, the money market fund can be considered 'AAA' equivalent for the purpose of the fund credit quality matrix and is limited to 25% per fund. Bond funds that are rated by us are eligible investments and are factored into the credit matrix according to their rating.

If the money market fund is not rated by us (either unrated or rated by another NRSRO) and is regulated under 2a-7, the money market fund should be considered 'AA' equivalent for the purpose of the credit matrix, and is limited to 5% per money fund adviser and 25% in total.

An unrated, non-2a-7 money fund is not eligible for a rated bond fund. Unrated bond funds are also ineligible for a rated bond fund.

## Fund Credit Quality Ratings Definitions

### 'AAA'

The fund's portfolio holdings provide extremely strong protection against losses from credit defaults.

### 'AA'

The fund's portfolio holdings provide very strong protection against losses from credit defaults.

### 'A'

The fund's portfolio holdings provide strong protection against losses from credit defaults.

### 'BBB'

The fund's portfolio holdings provide adequate protection against losses from credit defaults.

### 'BB'

The fund's portfolio holdings provide uncertain protection against losses from credit defaults.

### 'B'

The fund's portfolio holdings exhibit vulnerability to losses from credit defaults.

### 'CCC'

The fund's portfolio holdings make it extremely vulnerable to losses from credit defaults.

### + or -

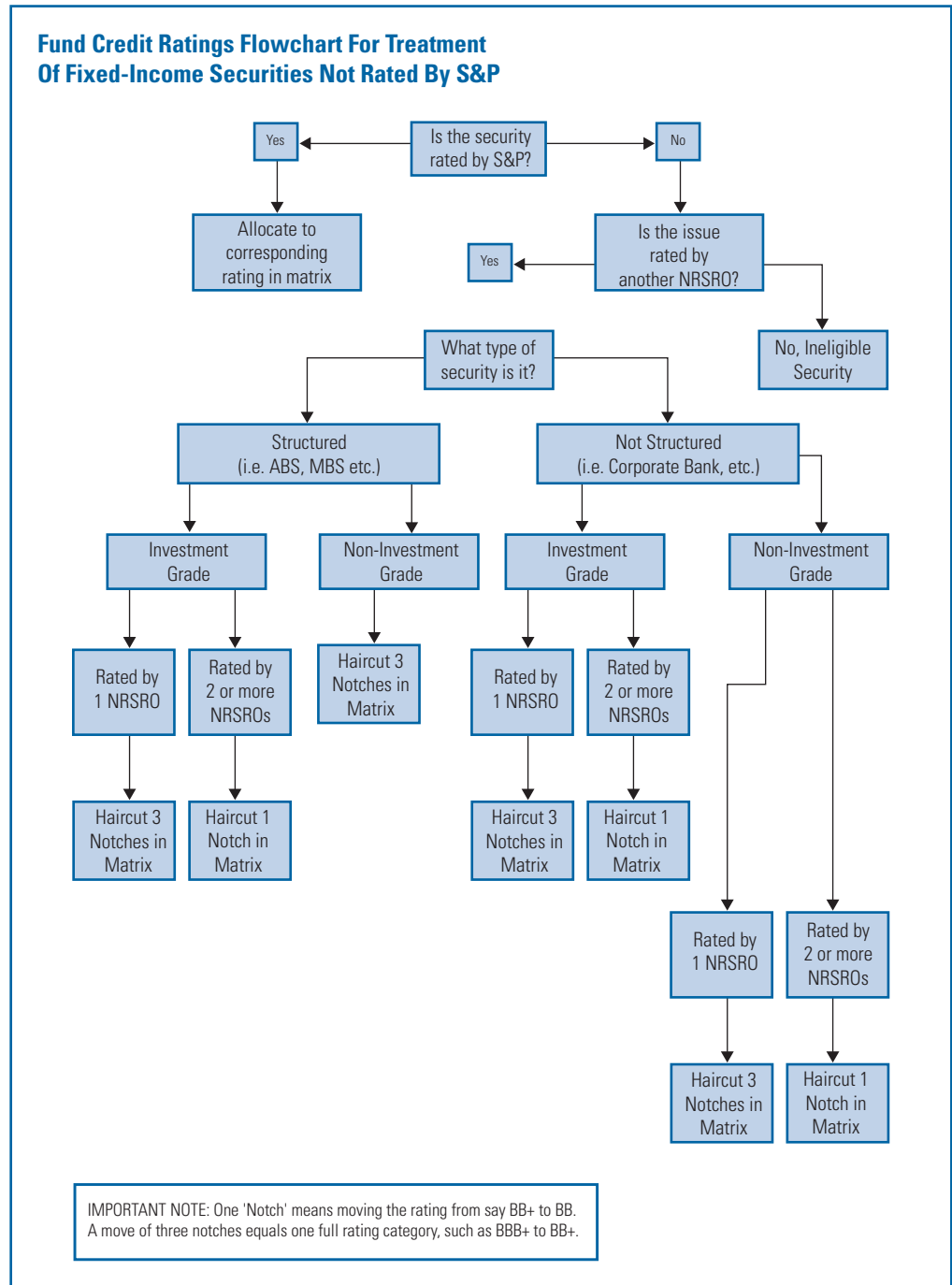
The ratings from 'AA' to 'CCC' may be modified by adding a plus (+) or minus (-) sign to show relative standing within the major rating categories.

A fund credit quality rating is not a recommendation to purchase, sell, or hold a security, inasmuch as it is not a comment on the market price, yield, or suitability for a particular investor. The ratings are based on current information furnished by the fund or obtained from other sources we consider reliable. We do not perform an audit in connection with any rating and may, on occasion, rely on unaudited information. The ratings may be changed, suspended, or withdrawn as a result of changes in, or unavailability of, such information, or based on other circumstances.

### Deposits With Foreign Bank Branches

If a fund has exposure to bank obligations issued from a branch located outside the country of the rated issuer or counterparty (e.g., time deposits with a foreign branch), the sovereign risk posed by the host country

must also be taken into consideration. Under corporate law, “a branch has no separate existence from the bank; however, branches are also subject to the laws of their host countries.” Therefore, a foreign sovereign government may affect the financial and



operating environment of entities under its jurisdiction. In assessing the rating of these banks and their obligations, our Financial Institutions group takes many factors into consideration; one such aspect may be whether or not banks are subject to deposit freezes, debt payment moratoriums, and exchanges controls that might directly prohibit their paying certain classes of liabilities. (For more information on this topic, please refer to Standard & Poor's' FI criteria entitled "Sovereign Risks and Bank Ratings" and "Sovereign Risk for Financial Institutions.")

For the purposes of our fund credit ratings, bank deposits with a branch outside the parent bank's domicile should be with host sovereign countries that are rated by an NRSRO. When calculating the fund's credit quality breakdown, the lower of the bank's and the sovereign's ratings should be used in our Fund Credit Rating matrix. (See flowchart entitled "*Treatment of Deposits with Foreign Bank Branches*" in the security-specific criteria section of this book.)

### Leverage In Rated Funds

Fixed-income portfolio managers leverage portfolios by borrowing money at short-term financing rates, and investing in longer- or higher-yield securities in an attempt to increase total returns. Leverage can present more risk by increasing a fund's duration and price exposure. We have highlighted the criteria below for rated funds engaging in leverage-type transactions.

#### Reverse repurchase agreements and dollar rolls

In evaluating the risks to the portfolio presented by the reverse repo positions, we consider the duration risk of the collateral, as well as the duration of the securities purchased with the borrowed cash. Investments purchased through reverse repos may extend the average duration of a fund's portfolio, and thereby increase the risk-equivalent exposure in dollars. In general, an increase in a fund's leverage position will increase its risk and return exposure.

Dollar rolls are similar to reverse repo positions in the MBS market in that they

allow investors to take a leveraged position in mortgages.

Our criteria for registered funds generally follow the Investment Company Act of 1940, which limits a fund's leverage to one-third of total portfolio assets. In cases where funds utilize leverage greater than one-third of total portfolio assets, our fund volatility rating analysis will reflect the increased leverage.

### Futures And Options

Treasury futures and options are powerful tools that fund managers can use to adjust a fund's interest rate exposure. Futures and options can be used to take active bets on the direction of interest rates to match target duration, or to hedge an existing cash or futures position. When evaluating the volatility profile of a fund's investment portfolio, we analyze the risk presented by the duration of futures and options positions to determine how it affects the interest rate sensitivity of the fund. In addition, we require that rated funds must use recognized exchanges.

### Credit Default Swaps

As the credit default swaps (CDS) market continues to grow in popularity, we have developed criteria for the treatment of CDS' in funds that have Credit Quality Ratings. This CDS fund rating criteria has been developed specifically to the quantification of CDS in our fund credit quality matrix. The following will explain how we treat both single-name CDS and iTraxx CDS Indices:

#### Single-name CDS

- Long risk positions will add to the overall credit score of the fund. If a manager sells protection, exposure to the reference entity increases in line with the current credit matrix. The total credit score increases by the exposure to the entity multiplied by the credit rating factor;
- Short risk positions do not detract from credit scores. If a manager purchases protection and does not hold an underlying position to the reference entity, the total credit score will not be reduced;

- Short risk positions used to hedge underlying physicals reduce credit scores. If a manager purchases protection and holds an offsetting, underlying position to the reference entity, the total credit score will be reduced.
- A short position to an iTraxx contract does not detract from the overall credit score if the manager does not hold a physical position, or if he or she is unable to track iTraxx exposures daily. (See Appendix: Treatment of Credit Default Swap Baskets page 76)

#### iTraxx CDS indices

- Long risk positions will add to credit scores. Managers are required to calculate the underlying exposures through the credit matrix to come up with a credit score for the contract. For example, the current Australian iTraxx Series 5 has 25 exposures at 4% each, ranging from 'AA-' to 'BBB-'. Working the underlying reference entities through our credit matrix, a credit score of 118 is achieved;
- Short positions in an iTraxx contract for which one or more of the underlying reference names are held within the physical portfolio can be netted off if managers can demonstrate that their systems monitor and maintain the underlying iTraxx exposures;

#### Diversification

We are currently evaluating the benefits of diversifying a fund's investments. The diversification of a portfolio of assets can better protect a fund from changing market conditions than a fund that is not well diversified. We are actively seeking to quantify the impact of diversification of assets in bond funds and hope to publish criteria on the subject in the near future. Look for updates on this and other criteria changes at [www.standardandpoors.com](http://www.standardandpoors.com). ■

# Fund Volatility Rating Criteria

Standard & Poor's Ratings Services' Fund Volatility Ratings are designed to rank or designate fixed-income funds according to the degree to which they are exposed to the factors that ultimately lead to share price and return volatility. The volatility ratings scale, which ranges from 'S1' (lowest sensitivity) to 'S6' (highest sensitivity), expresses our current opinion of a fixed-income fund's sensitivity to changing market conditions. Some funds are assigned an 'S1+' volatility rating, the '+' indicating extremely low sensitivity to changes in interest rates. These funds are generally enhanced cash or "money market plus" funds. The volatility profiles of the first four categories ('S1' through 'S4') are measured and expressed on a relative basis to established government indices with different maturity bands to provide investors with market benchmarks for risk and return comparisons.

Our evaluation of funds for volatility ratings includes the following:

- Portfolio risk analysis;
- Historical return analysis; and
- Management assessment.

Portfolio risk and historical return analyses often yield similar results, and reflect a long-term commitment to a particular investment objective and risk-tolerance level by the fund's adviser and portfolio manager. Where there are significant differences between the current risk and historical return profiles,

management assessment becomes particularly important. Discussions with fund management about investment policies and strategies, asset selection, internal research capabilities, and portfolio risk monitoring help us to assess the fund's current and ongoing risk profiles. The primary goal is to evaluate the adviser's effectiveness in maintaining an investment policy that is consistent with the fund's stated investment objectives and investors' expectations.

The ratings analysis focuses on measuring quantifiable portfolio risk factors including interest-rate risk, yield curve risk, credit risk, liquidity risk, options risk, and concentration risk. In addition, we evaluate the pool's total return historical volatility. This review involves two types of analysis. First, the identification centers on the level of volatility and distribution of monthly returns of the pool during a minimum of 36 months in relation to certain fixed-income asset classes and

indices that we track on a continuing basis. The second analysis is focused on understanding how past volatility relates to the pool's investment objectives, the portfolio construction process (including risk controls), and the fund's outcome as a result of market developments that occurred during the period under review. The relevance of this part of the analysis in the final volatility rating will depend on the second step in the rating process, or the portfolio analysis.

## Fund Volatility Ratings Definitions

### 'S1'

Funds that possess low sensitivity to changing market conditions are rated 'S1'. These funds possess an aggregate level of risk that is less than or equal to that of a portfolio comprised of government securities (government securities-for 'S1' through 'S4' categories-are intended to signify the most liquid, highest-quality securities issued by a sovereign government) maturing within one to three years and denominated in the base currency of the fund. Within this category, certain funds are designated with a plus sign (+). This indicates the fund's extremely low sensitivity to changing market conditions. These funds possess an aggregate level of risk that is less than or equal to that of a portfolio comprised of the highest-quality, fixed-income instruments with an average maturity of one year or less.

### 'S2'

Funds that possess low to moderate sensitivity to changing market conditions are rated 'S2'. These funds possess an aggregate level of risk that is less than or equal to that of a portfolio comprised of government securities maturing within three to seven years and denominated in the base currency of the fund.

### 'S3'

Funds that possess moderate sensitivity to changing market conditions are rated 'S3'. These funds possess an aggregate level of risk that is less than or equal to that of a portfolio comprised of government securities maturing within seven to 10 years and denominated in the base currency of the fund.

### 'S4'

Funds that possess moderate to high sensitivity to changing market conditions are rated 'S4'. These funds possess an aggregate level of risk that is less than or equal to that of a portfolio comprised of government securities maturing beyond 10 years and denominated in the base currency of the fund.

### 'S5'

Funds that possess high sensitivity to changing market conditions are rated 'S5'. These funds may be exposed to a variety of significant risks including high concentration risks, high leverage, and investments in complex structured and/or illiquid securities.

### 'S6'

Funds that possess the highest sensitivity to changing market conditions are rated 'S6'. These funds include those with highly speculative investment strategies with multiple forms of significant risks, with little or no diversification benefits.

The ratings are based on current information furnished by the fund to us or obtained by us from other reliable sources. We do not perform an audit in connection with any rating, and may rely on unaudited financial information. The ratings may be changed, suspended, or withdrawn as a result of changes in availability or other circumstances. The rating is not a recommendation to purchase, sell, or hold any security, held or issued by the fund, inasmuch as it does not comment on market price, yield, or suitability for a particular investor.

The analysis of current portfolio risk is undertaken to confirm (or not confirm) the continuation of past investment policies and their attendant risks. Portfolio analysis is designed specifically to evaluate whether the fund has a greater chance of losing more money (i.e., experience greater volatility) in the short term than historical volatility of returns would suggest. An abnormal, short-term loss is one that is inconsistent with the fund's history, current market conditions, or the fund's stated investment objectives. Furthermore, while higher risk is often associated with higher returns, higher risk also means a greater uncertainty over all outcomes. Risk or volatility can manifest itself in either a continuous fashion or at discrete intervals, in which case the illusion of low volatility can often prevail for an extended period of time. For example, interest rate-sensitive funds (funds that invest in highly creditworthy securities like U.S. Treasury securities) often exhibit more volatility than funds that invest in low-grade, high-yield, or illiquid securities;

however, at times, these funds can exhibit high to extremely high volatility due to investor sentiment regarding increased default or liquidity risks. Portfolio analysis often incorporates stress-testing techniques that examine the portfolio's returns (or expected returns) under various market scenarios, as well as for different portfolios. Portfolio-level risk analysis is focused on understanding the sources or factors that contribute to risk, which, for most bond funds investing in marketable fixed-income securities, includes interest-rate/option risk, credit risk, and liquidity risk.

### Interest-Rate/Option Risk

Interest-rate risk refers to the fact that the longer the maturity of a security, the more uncertain and therefore more risky the present value of its cash flows. Securities with an uncertain maturity such as callable securities, or securities with embedded options (e.g., mortgage-backed bonds) are riskier than

## Duration Measures Price Sensitivity To Interest Rates

**D**uration can be used to quantify a fixed-income fund's exposure to interest-rate risk. It is defined as an estimate of the fund's price sensitivity to a given change in interest rates. That is, for a small parallel upward/downward shift in the interest rate, the portfolio will lose/gain a percentage of its value that is approximately equal to its duration.

For example, if Fund A is a short-term treasury fund with a duration of two years, and Fund C is a long-term treasury fund with a duration of 10 years, and interest rates rise by 1% (100 bps), Fund A will lose approximately 2% in value, while Fund C will lose approximately 10% in value, all else being equal. Similarly, if interest rates decline by 1%, Fund A will gain approximately 2% in value, while Fund C will gain approximately 10% in value. The longer a fund's duration, the more sensitive it will be to changes in interest rates. Quantitatively, for small changes in interest rates, the estimation of duration (D) is defined as:

$$D = -(\Delta p / \Delta y) / p$$

$$\Delta p = p^+ - p^-$$

$$\Delta y = y^+ - y^-$$

$$\Delta = \text{Change.}$$

Duration is quoted in years because the rate shift is measured in yield, which is return per year. The symbol "p" is the current price, "p+" is the price when rates have shifted up, "p-" is the price when rates have shifted down, "y+" is the new rate when shifted up, and "y-" is the new rate when shifted down.

those with a known maturity. In addition, the distribution of a security or a fund's cash flow along the maturity spectrum (or yield curve) is as relevant as the maturity itself. A bond's interest-rate risk is best measured by its duration. Duration approximates the overall price sensitivity of the portfolio to changes in interest rates. Duration is a more precise measure of interest-rate risk than maturity because duration accounts for all of the bond's cash flow. For example, when rates rise by 0.5% [or 50 basis points (bps)], the value of a pool with a duration of four years will decrease by about 2%.

### Credit And Liquidity Risks

Credit and liquidity risks are distinct, although often closely related. Credit risk refers to the possibility that an issuer may become unable or unwilling to meet its payment obligations on time or in full. Securities

with higher credit risk trade on higher yields compared to lower credit risk securities, and the variations in such yield spreads are often described as spread risk. Liquidity risk refers to the possible price penalty incurred when buying or selling a particular security or asset for which there is a limited secondary market. Liquidity is also measured by how quickly a security can be sold.

We consider the effects of these risks, among others, when evaluating the overall price sensitivity of a fund. The relevant risk is the aggregate risk, measured after all diversification benefits are taken into account.

### Management Assessment

Fund manager assessment is an opportunity for us to gain an in-depth understanding of different factors that could affect a fund's overall risk profile. Because fund managers can have a significant impact on the fund's

## Information Needed For A Fund Credit Quality And Volatility Rating

- A letter requesting our rating;
- The most recent prospectus, statement of additional information, and any marketing materials;
- A copy of the annual report for the past year;
- A copy of the fund's investment policy, including policies concerning asset eligibility, selection, and evaluation process;
- Policies regarding repurchase agreements, including a copy of the master repurchase agreement(s) and legal representations;
- Policies concerning hedging transactions, alternative fixed-income securities, including the use options and/or futures contracts, etc.;
- Policies on leveraging portfolio assets;
- Frequency and method of securities pricing, reporting, risk controls, and oversight process;
- Monthly net asset value figures and assets for the past three years, total return numbers for the past six years (where possible);
- Proposed/current mix of shareholders (e.g., retail, institutional), and percentage of fund shares held by largest 10 shareholders;
- Current asset size or proposed asset size;
- Current list of portfolio holdings, or for new funds, a hypothetical portfolio with security descriptions, CUSIPs, ratings, and prices;
- List of securities approved for purchase according to asset type, credit quality, maturity, and sector;
- Level of insurance coverage (Fidelity Bond, Error and Omission, Director and Officer);
- A copy of the most recent SEC post-examination letter and fund adviser's response letter;
- Biographies and organizational chart of key fund employees; and
- Background materials on sponsor, company structure, related companies.

## Suggested Agenda For Fund Credit Quality And Volatility Rating Management Meeting

### Overview—At the firm level

1. Organization
  - History of firm
  - Assets under management
  - General expertise of firm
  - Staff size and function-organization charts
  - Role of board of directors and sponsors
  - Primary functions of key officers
  - Fund managers, traders, and research professionals' experience and background

### Investment strategy/style— At the fixed-income group level

1. Basic philosophy
  - Investment and marketing strategy
2. Oversight
  - Written procedures and guidelines
  - Strategy/sector meetings
  - Index selection-oversight
  - Pricing and trading
  - Compliance
  - Backup and disaster recovery
  - History of back-office problems
3. Fixed-Income Team
  - Key people
  - Roles and responsibilities
  - Research and analysis
4. Credit Team
  - Key people
  - Organization
  - Culture
  - Process
5. Risk Management
  - Duration
  - Term structure
  - Call risk
  - Credit risk
  - Concentration
  - Strategies
  - Tools and models
  - Criteria and limits
6. Asset Type
  - MBS/CMO
  - ARM
  - Municipal
  - High-yield

- Foreign
- Derivatives (swaps, futures, and credit default swaps)

### Daily operating procedures—At the sector/fund level

1. Activities
  - Who makes decisions
  - Trades
  - Cash-flow analysis
  - Level of liquidity determination
  - Management's view of the fund, vis-à-vis other funds
2. Liquidity
  - Portfolio mix
3. Shareholders
  - Shareholder base and account characteristics
  - Asset size volatility
  - Net redemptions

### Fund specifics

1. Fund Targets
  - Objective
  - Duration
  - Maturity
  - Quality (credit rating)
  - Market sectors
  - Coupons
  - Call factors
  - Prepayments
  - Other
2. Historical Performance
3. Redemption Experience
  - Asset-size volatility
  - Net redemptions
  - Shareholder base and account characteristics
4. Daily Operating Procedures
  - Timely purchases and redemptions
  - Computer applications and adequacy of computer facilities
  - Computer backup provisions
  - Security settlement provisions

### Fund governance

1. What compliance procedures are in place for the fund and fund management?
2. How often are they reviewed and updated?
3. Is there a defined risk management process in place to ensure funds are managed within their objectives and established risk parameters?

## Monthly Information Needed To Monitor A Fund Credit Quality And Volatility Rating

1. Complete Portfolio Surveillance Information Sheet and submit it via our secure web-based data collection system along with the portfolio holdings report (described below).
2. Portfolio Holdings Risk Reports  
For each security provide:
  - Par value
  - Current market value
  - CUSIP number
  - Full description of investment, including issuer, interest rate, and maturity date
  - Insurer, if applicable (note: if preinsured, portfolio-insured, or second-market insured)
  - Percent of portfolio
  - Standard & Poor's rating (and whenever possible or necessary, Moody's and Fitch ratings as well).
  - Effective duration
  - Effective convexity
3. Other portfolio activities  
Please provide information on all transactions related to the fund such as:
  - Reverse repurchase agreements (include underlying collateral and terms)
  - Dollar rolls
  - Futures (list trading exchange)
  - Securities lending program (include list of securities lent out as part of program)
  - Leverage (provide the long/short securities broken out separately)
4. Acquisition/Disposition Report  
Listing of portfolio securities bought and sold throughout the month. For each security, the information listed above (par value, market value, etc.) should be specified.
5. Portfolios should be sent along with the surveillance information sheet via the secured web-based platform. (Acceptable file format: Excel or Adobe PDF)
6. Fund Changes or News  
Any additional information related to the fund's operation should be forwarded such as:
  - Changes in investment policies or operating procedures;
  - Current prospectus and statement of additional information;
  - Notification of changes to prospectus or statement of additional information;
  - Notification of fund name change or mergers;
  - Notification of changes in board of directors, senior management, investment adviser, or custodian;
  - Annual and semiannual reports; and
  - All press releases relevant to the fund.

55 Water St., 33rd Floor, Fund Services—Surveillance New York, New York 10041 General Telephone: 212-438-5073, Fax 212-438-5075

**Surveillance Requirements for Fund Credit Quality and Volatility Ratings**

If the data is truncated on the screen please move the mouse over it to see entire text as a tooltip

**S&P Surveillance**

Analyst: Name Telephone 212-438-XXXX  
 Email: first\_last@standardandpoors.com  
 Name of Fund: Some Fund  
 Portfolio Date: 1/31/2007

Please Attach Portfolio Holdings Information

<< Attach File(s) >>

**Contact Information**

Name:    
 Company:   
 Tel:   
 Email:

**Fund Summary**

Net Assets (US\$, in millions)   
 Market Value (US\$, in millions)   
 Par Value (US\$, in millions)   
 Gross Assets (US\$, in millions)   
 Monthly Total Returns (%)

Net Asset Value (per share)   
 Wtd. Avg. Maturity (WAM) (in years)   
 Effective Duration   
 Modified Duration   
 Yield to Maturity (%)

**Security Types (%)**

Update Total

**Leverage as % of Net Assets**

Futures   
 Reverse Repo   
 Securities Lending   
 Uncovered Dollar Rolls

**Maturity Distribution (%)**

Update Total

**Top Ten Holdings (%)**

#	Issuer Name	% of Portfolio
1	<input type="text"/>	<input type="text"/>
2	<input type="text"/>	<input type="text"/>
3	<input type="text"/>	<input type="text"/>
4	<input type="text"/>	<input type="text"/>
5	<input type="text"/>	<input type="text"/>
6	<input type="text"/>	<input type="text"/>
7	<input type="text"/>	<input type="text"/>
8	<input type="text"/>	<input type="text"/>
9	<input type="text"/>	<input type="text"/>
10	<input type="text"/>	<input type="text"/>

**Comments (maximum 2000 characters)**

**S&P Ratings (%)**

Rating	<=90 Days	>90 But <=365 Days	>365 Days
AAA	<input type="text"/>	<input type="text"/>	<input type="text"/>
AA+	<input type="text"/>	<input type="text"/>	<input type="text"/>
AA	<input type="text"/>	<input type="text"/>	<input type="text"/>
AA-	<input type="text"/>	<input type="text"/>	<input type="text"/>
A+	<input type="text"/>	<input type="text"/>	<input type="text"/>
A	<input type="text"/>	<input type="text"/>	<input type="text"/>
A-	<input type="text"/>	<input type="text"/>	<input type="text"/>
BBB+	<input type="text"/>	<input type="text"/>	<input type="text"/>
BBB	<input type="text"/>	<input type="text"/>	<input type="text"/>
BBB-	<input type="text"/>	<input type="text"/>	<input type="text"/>
BB+	<input type="text"/>	<input type="text"/>	<input type="text"/>
BB	<input type="text"/>	<input type="text"/>	<input type="text"/>
BB-	<input type="text"/>	<input type="text"/>	<input type="text"/>
B+	<input type="text"/>	<input type="text"/>	<input type="text"/>
B	<input type="text"/>	<input type="text"/>	<input type="text"/>
B-	<input type="text"/>	<input type="text"/>	<input type="text"/>
CCC+	<input type="text"/>	<input type="text"/>	<input type="text"/>
CCC	<input type="text"/>	<input type="text"/>	<input type="text"/>
CCC-	<input type="text"/>	<input type="text"/>	<input type="text"/>
A-1+	<input type="text"/>	<input type="text"/>	<input type="text"/>
A-1	<input type="text"/>	<input type="text"/>	<input type="text"/>
A/A-2	<input type="text"/>	<input type="text"/>	<input type="text"/>
A-/A-2	<input type="text"/>	<input type="text"/>	<input type="text"/>
BBB+/A-2	<input type="text"/>	<input type="text"/>	<input type="text"/>
BBB/A-3	<input type="text"/>	<input type="text"/>	<input type="text"/>
BBB-/A-3	<input type="text"/>	<input type="text"/>	<input type="text"/>

Update Total

Save Draft

Submit Final

Cancel

future risk profile, we meet with fund managers to discuss various portfolio risk-related topics. At these meetings, we look at management sophistication and experience, the quality of research support, dedication to controlling risk within established guidelines,

portfolio strategies, and the frequency and extent of changes to portfolio holdings, among other factors. Even after a fund is rated, we meet with the fund managers at least annually. ■

# Liquidity Assessments

**L**iquidity Assessments were introduced to provide issuers with a cost-effective alternative to traditional bank liquidity facilities for the provision of liquidity support for variable rate debt instruments, CP, and other types of short-term debt. Issuers have indicated that bank liquidity facilities are often expensive and can be cumbersome to administer.

Creditworthy tax-exempt debt issuers with “excess” available and highly liquid assets, sufficient to meet all debt obligations on a full and timely basis, can use their own “liquid assets” to provide liquidity support for CP and Variable Rate Demand Obligations (VRDO) tenders. During the past few years, more than 40 municipal issuers from all public finance sectors (higher education, health care, housing, state and local governments and foundations) with a surplus of high-quality, short-to-intermediate term fixed-income assets have sought to use these pools as backup liquidity support for their short-term debt issues. Issuers utilize “Liquidity Assessed” status to provide coverage for their short-term debt obligations. The excess cash not used to pay the municipality’s short-term obligations can also be used to back their outstanding debt in case of a failed remarketing attempt. This option can take the place of the more traditional backing by an LOC or Standby Bond Purchase Agreement. Therefore, an issuer’s liquid assets can provide a cost-effective alternative to traditional liquidity sources, and offer an added source

of liquidity with the ability to leverage internal assets.

A liquidity assessment conducted by the Standard & Poor’s Fund Ratings and Evaluations Group is the initial, ongoing assessment of the total liquid assets an entity has readily available that can be converted to cash to meet short-term debt obligations for failed remarketing of variable rate debt or CP. The liquidity assessment includes the following:

- An analysis of liquidity, market risk, and volatility of the issuer’s current cash, fixed-income portfolio holdings, risk management, and operations;
- An assessment of management’s plans to provide cash-liquidation plans-including a current maximum dollar assessment of the issuer’s ability to raise cash or provide liquidity on its own; and
- Monthly monitoring of key portfolios and related data to ensure sufficiency and liquidity of assets.

The process and information needed to conduct a liquidity assessment on a tax-exempt debt issuer is outlined below. ■

## Outline Of The Liquidity Assessment Process

The following steps outline the process and information required by our company to perform its initial and ongoing liquidity assessment.

### Information required

1. A copy of the current investment policies for the pool of assets being pledged for liquidity including policies on hedging transactions, the use of options and/or futures contracts, and the leveraging of assets. Where necessary, the investment policies must indicate that the pool can hold securities issued by municipalities and/or its own debt;
2. A copy of the most current offering statement or offering memorandum;
3. Month end pool(s) balances for three previous years;
4. The weighted average maturities and/or durations for the fixed income assets for each month during the past three years;
5. Details on the constituents of the pool, if applicable (total number, average account size, % held by top 10 participants, mandatory versus voluntary, etc.);
6. Current list of fixed-income portfolio holdings used for self-liquidity including: CUSIP number, description, asset type, sector, price, par, maturity, and our credit rating;
7. Organizational chart and biographies of key investment personnel including telephone numbers and email addresses;
8. Documented liquidation procedures detailing the necessary steps to provide funds needed to cover the put in the event of a failed remarketing. Note: This letter should be addressed to the Public Finance/Government Ratings Lead Analyst;
9. Where necessary, a legal opinion verifying the issuer's legal ability to pledge the assets used for liquidity support;
10. A signed letter requesting our company conduct a liquidity

assessment for the Issuer. The letter should be addressed to the attention of: Gary R. Arne, Managing Director.

### Management interview/meeting

When the above information is received, a meeting or conference call is held to discuss the investment management process/philosophy for the assets being used for liquidity support. Whenever possible, face-to-face meetings are conducted.

### Ongoing reporting requirements

Once the initial portfolio assessment is complete, monthly surveillance reports are required to maintain current assessment of portfolio liquidity, market risk, and credit quality. These reports should contain a portfolio summary sheet, debt to asset coverage ratio, and a portfolio holdings report, which provides the following information on each holding: issuer, CUSIP, price, par, maturity, and rating. These reports should be submitted by the 15th following the last day of each month.

After a liquidity assessment is conducted and sufficient liquidity is determined, an issuer can expect the following:

- A letter (at least annually) affirming the issuer's sufficiency of assets to cover liquidity obligations;
- Ongoing surveillance of issuer's cash, and fixed-income portfolios ensuring current assessment of liquidity profile;
- Feedback from our analysts regarding availability of liquidity for current or future proposed short-term debt issuance;
- Description of issuer's liquidity profile and our rationale for the short-term rating supported by self-liquidity.

# Credit Quality

## Principal Stability Fund Ratings Definitions And Criteria Summary

A principal stability fund rating (also known as a money market fund rating) is not directly comparable with a bond rating due to differences in investment characteristics, rating criteria, and creditworthiness of portfolio investments. For example, a money market fund portfolio provides greater liquidity, price stability, and diversification than a long-term bond, but not necessarily the credit quality that would be indicated by the corresponding bond rating. Ratings are not commentaries on yield levels. A principal stability fund rating is not a recommendation to buy, sell, or hold the shares of a fund. Further, the rating may be changed, suspended, or withdrawn as a result of changes in or unavailability of information related to the fund.

Rating	Definitions	Minimum* 'A-1+'	Maximum 'A-1'	Maximum 'A-2'	Maximum Weighted Avg. Maturity (WAM) (Days)	Floating-Rate Note (FRN) Maximum Final Maturity
'AAAm'	Fund has extremely strong capacity to maintain principal stability and to limit exposure to principal losses due to credit, market, and/or liquidity risks.	50%	50%	None	60	Two years
'AAm'	Fund has very strong capacity to maintain principal stability and to limit exposure to principal losses due to credit, market, and/or liquidity risks.	20%	80%	5% overnight	75	Three years
'Am'	Fund has strong capacity to maintain principal stability, but is somewhat more susceptible to principal losses due to adverse credit, market, and/or liquidity risks.	None	100%	10% overnight	90	Four years
'BBBm'	Fund has adequate capacity to maintain principal stability. Nevertheless, adverse market conditions and/or higher levels of redemption activity are more likely to lead to a weakened capacity to limit exposure to principal loss as a result of higher exposure to credit, market, and/or liquidity risks.	None	100%	25% overnight	90	Five years
'BBm'	Fund has uncertain capacity to maintain principal stability, and is vulnerable to principal losses resulting from its exposures to credit, market, and/or liquidity risks.	None	None	None	120	None
'Dm'	Fund has failed to maintain principal stability resulting in a realized or unrealized loss of principal.					
'G'	The letter 'G' follows the rating symbol when a fund's portfolio consists entirely of direct U.S. government securities.					
+ or -	Ratings may be modified (except 'AAAm') to show relative standing within the rating categories.					

\*Investments rated 'A-1' maturing in seven days or less can be counted toward the 'A-1+' percentage minimums.

**Table 1 Standard & Poor's Fund Credit Quality Rating Matrix**

To calculate a fund's credit score, multiply the % the fund holds in each bucket by the corresponding factor. Take the sum of the results to determine the fund's overall credit score. For example, if a fund held 50% in 'AAA' > 365 days, 25% in 'AA' > 365 days, and 25% in 'A+' < 90 days, the contribution to score would be 0+5+0 totaling 5, which corresponds to a 'AAAF' credit rating.

Important note: Please use legal final maturity for all securities (including floating-rate securities) or as otherwise indicated in the criteria.

Rating	—Factors—			Contribution to Score
	< = 90 days	> 90 but < = 365 days	> 365 days	
'AAA'	0.00	0.00	0.00	
'AA+'	0.00	0.00	20.00	
'AA'	0.00	0.00	20.00	
'AA-'	0.00	0.00	20.00	
'A+'	0.00	0.00	50.00	
'A'	20.00	20.00	50.00	
'A-'	20.00	20.00	50.00	
'BBB+'	20.00	50.00	250.00	
'BBB'	50.00	50.00	250.00	
'BBB-'	50.00	250.00	250.00	
'BB+'	1000.00	1000.00	1000.00	
'BB'	1000.00	1000.00	1000.00	
'BB-'	1000.00	1000.00	1000.00	
'B+'	4000.00	4000.00	4000.00	
'B'	4000.00	4000.00	4000.00	
'B-'	4000.00	4000.00	4000.00	
'CCC+'	20000.00	20000.00	20000.00	
'CCC'	20000.00	20000.00	20000.00	
'CCC-'	20000.00	20000.00	20000.00	
'A-1+'	0.00	0.00		
'A-1'	0.00	0.00		
'A/A-2'	20.00	20.00		
'A-/A-2'	20.00	20.00		
'BBB+/A-2'	20.00	50.00		
'BBB/A-2'	50.00	50.00		
'BBB/A-3'	50.00	50.00		
'BBB-/A-3'	50.00	250.00		
Totals =				0.00

**Table 2 Scoring Table**

<b>Scores</b>	<b>Rating</b>	<b>Fixed Score</b>
0 - 7	'AAAf'	7
8 - 10	'AA+f'	10
11 - 20	'AAf'	20
21 - 25	'AA-f'	25
26 - 35	'A+f'	35
36 - 50	'Af'	50
51 - 90	'A-f'	90
91 - 150	'BBB+f'	150
151 - 250	'BBBf'	250
251 - 450	'BBB-f'	450
451 - 775	'BB+f'	775
776 - 1000	'BBf'	1000
1001 - 1850	'BB-f'	1850
1851 - 2520	'B+f'	2520
2521 - 4000	'Bf'	4000
4001 - 7800	'B-f'	7800
7801 - 14700	'CCC+f'	14700
14700 +	'CCCf'	20000

<b>Treatment of Credit Default Swaps</b>				
<b>Entity</b>	<b>Weight (%)</b>	<b>Rating</b>	<b>Matrix weight</b>	<b>Score</b>
Amcor Ltd.	4	BBB	250	10
AMP Group Holdings Ltd.	4	A	50	2
Australia and New Zealand Banking Group Ltd. (NZ Branch)	4	AA-	20	1
BHP Billiton Ltd.	4	A+	50	2
Coles Myer Finance (U.S.A.) Ltd.	4	BBB	250	10
CSR Ltd.	4	BBB+	250	10
Foster's Group Ltd.	4	BBB	250	10
GPT Group	4	BBB+	250	10
Lend Lease Corp. Ltd.	4	BBB-	250	10
Macquarie Bank Ltd.	4	A	50	2
National Australia Bank Ltd.	4	AA-	20	1
Publishing and Broadcasting Ltd.	4	A-	50	2
Qantas Airways Ltd.	4	BBB+	250	10
QBE Insurance Group Ltd.	4	A-	50	2
Rinker Group Ltd.	4	BBB+	250	10
Rio Tinto Ltd.	4	A+	50	2
SingTel Optus Pty Ltd.	4	A+	50	2
St. George Bank Ltd.	4	A+	50	2
Telecom Corp. of New Zealand Ltd.	4	A	50	2
Telstra Corp. Ltd.	4	A	50	2
The Australian Gas Light Company	4	BBB	250	10
Wesfarmers Ltd.	4	A-	50	2
Westfield Group	4	A-	50	2
Westpac Banking Corp.	4	AA-	20	1
Woolworths Ltd.	4	A-	50	2
Total score				118



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