

REQUEST FOR COMMENT **Moody's Proposes New Money Market Fund Rating Methodology and Symbols**

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Introduction

This Request for Comment describes the framework of a proposed new methodology for rating money market funds (MMFs). If adopted, our new rating methodology will supersede the following principal methodologies as they apply to money market funds: "Moody's Managed Funds Credit Quality Ratings Methodology" and "Money Market and Bond Fund Market Risk Ratings" (both published in July 2004). At the same time, we are proposing the introduction of a new set of rating symbols and definitions we believe will better address the unique risks of money market funds and better distinguish our money market fund ratings from our credit ratings on long-term debt obligations.

Why Are We Proposing Methodology Changes?

There are a number of reasons why we are proposing a change to our rating methodology and the introduction of a new rating scale for money market funds. To summarize:

- » In September 2008, 31 rated funds suspended redemptions, leading to delayed distributions, and in two cases, shareholders in those funds experienced principal losses. Further suspensions and additional losses would likely have occurred in the US if the US Treasury had not made principal protection insurance programs available to the money market fund industry. As a result of these developments, we lowered our ratings on the 31 funds to below the investment grade level.
- » This experience prompted a reconsideration of the approach we use to assign MMF ratings. Moody's initiated a dialog with fund managers, investors, and other market participants to come to a better understanding of the type of information investors in money market funds seek, the role of ratings in their investment decisions, and the particular attributes of our ratings that they find most valuable.



- » Historically, we have rated money market funds using an approach that emphasizes portfolio credit quality and maturity structure, with consideration also given to factors such as portfolio strategy, manager/adviser characteristics, and the likelihood of sponsor support.¹ Because of investor expectations and market convention, and in some cases supported by regulation, rated funds generally invest very conservatively (typically, Prime-1 commercial paper of modest weighted average duration) and rating differentiation has been limited.
- » The performance of money market funds during the financial crisis, particularly after the Lehman Brothers' bankruptcy, heightened investors' focus on the wide range of risks facing these funds. The risks that were accentuated related to: 1) the vulnerability of money market funds to market and liquidity risks, in addition to credit risk; 2) the impact of the nature of the investor base on the susceptibility of a fund to redemption risk; 3) the vulnerability of a fund to illiquidity, despite owning highly-rated assets and the related investor expectation of high ultimate recoveries; and 4) the ability and willingness of sponsors to provide financial support to troubled funds. In addition, it has become clear that potential "runs" on money market funds pose a systemic risk.

The proposed methodology is intended to more effectively capture these risks by introducing objective measures to better assess factors such as liquidity risk and market risk, as well as asset quality and obligor concentrations. Greater emphasis is placed on a sponsor's willingness and ability to support a given fund or group of funds, if need be, as has happened throughout the history of this sector. Extending our analysis of money funds in areas that are increasingly important to investors is expected to result in greater ratings differentiation than under the existing methodology.

Finally, under Section 938 of the recently passed Dodd-Frank Wall Street and Consumer Protection Act – the US financial reform bill – upon rule-making by the Securities and Exchange Commission, nationally recognized statistical rating organizations will be prohibited from having multiple definitions for the same rating symbol. Since the form and nature of money market funds is distinct from bonds rated using our traditional Aaa to C long-term rating scale, and our rating approaches and rating definitions are different, we are proposing a new rating scale that better highlights the distinction between these two types of ratings.

Introduction of New Rating Symbols and Definitions

We have historically used a slightly modified version of our traditional long-term rating scale (Aaa to C) in rating money market funds,² where the preponderance of ratings is concentrated at the Aaa level. Indeed, money market funds are distinct from long-term fixed income instruments in that while they are generally undated, they are typically viewed as short-term investments and investors expect to be able to withdraw their funds on demand. Nonetheless, from a strictly legal perspective, money market fund investors own shares that represent an interest in a portfolio of securities.

Given the unique nature of money market funds – that is, investors own shares in the fund yet expect to be able to withdraw their funds on demand – we are proposing that long-term rating symbols be discontinued. Instead, we would rate money market funds based on our opinion of their ability to meet the dual objectives of preserving principal and providing liquidity to holders. To clearly distinguish these ratings from our long-term bond ratings, a distinct symbol set with its own definitions would be introduced following the form MF[n], on a rating scale from MF1+ to MF4.

¹ See "[Parental Support in Money Market Funds: Moody's Perspective](#)" dated November 2008.

² Moody's Money Market Fund ratings today are expressed by using symbols at the broad rating category level without the use of modifiers (e.g., -1, -2, -3). European Constant Net Asset Value (CNAV) funds are currently rated on the same scale and are also assigned an MR1+ symbol to denote their CNAV status.

Contrasting the Proposed New Rating Scale With Moody's Traditional Credit Ratings

Although money market funds are not credit instruments, they do compete for investor funds with short-term credit investments such as commercial paper, short-dated bonds, and bank deposits. Accordingly, investors may be interested in how the proposed money market fund ratings would compare with Moody's rating opinions expressed using our traditional long-term and short-term rating symbols. Due to the unique character of money market funds, a direct mapping of the proposed MF ratings to either Moody's long-term or short-term ratings is not appropriate, but comparisons can nevertheless be made.

Money market funds have no repayment date, yet investors expect their money on demand as they would for any short-term obligation or bank deposit. This means that a long-term fixed income rating is not necessarily the best expression of money market risks to investors. On the other hand, Moody's prime rating scale (Prime-1, Prime-2, Prime 3, and Not Prime) is not the best alternative either. Although a money market fund may have an expected loss profile consistent with its underlying (normally Prime-1) rated assets, its ultimate loss severity in case of fund liquidation or a redemption suspension event would typically be much lower than in the case of an individual defaulted Prime-1 rated obligation. In addition, money market funds are more sensitive to systemic risk and investor "runs" than Prime-1 rated obligations. Thus, neither the long-term nor short-term credit rating scale provides a basis for expressing the risk of money market funds that is consistent with other obligations rated on those scales.

We believe most money market funds rated MF1+ and MF1, and many of those rated MF2, by virtue of design and regulation, would exhibit expected ultimate recoveries consistent with highly-rated bonds (i.e., at least A-rated), but with a lower level of certainty regarding the timing of such receipts. In comparison to short-term debt obligations rated on the prime scale, we believe money market funds rated MF1 or MF1+ would exhibit a risk profile broadly consistent with Prime-1 rated investments. However, there is a higher expected frequency of payment interruption offset by higher expected recoveries in the event of payment interruption. Similarly, money market funds rated MF2 and MF3 might be compared to Prime-2 and Prime-3 rated investments, respectively, while recognizing distinctions in the meaning of the rating scales. Were we to express opinions on money market funds using the prime scale, which places a much greater weight on default probability than on loss-given-default, even conservatively invested funds may not receive Prime-1 ratings and many could be rated Prime-3 or even Not-Prime.

While we believe that the distinct MF scale provides investors with useful information and differentiation among funds, we recognize it may raise issues for some investors whose investment guidelines reference Moody's traditional credit rating scale. Indeed, for certain types of fixed income securities (e.g., some municipal bonds and structured financings), we expect to update our own rating criteria in these areas to accommodate the new rating scale. We plan to communicate more specifically about how the proposed MF ratings will be interpreted in the context of other Moody's rating methodologies once our methodology is finalized.

Enhanced Analysis and Improved Transparency

The proposed new methodology would use specific metrics to measure several factors that we consider indicative of a fund's ability to preserve principal and provide liquidity. The proposed new metrics address the following factors: (1) asset profile, including weighted average maturity (WAM) and obligor concentration; (2) portfolio liquidity, measuring different liquidity "buckets" (daily or weekly) relative to investor concentration and fund assets under management (AUM); and (3) market risk where the impact of specified market shocks on a fund's net asset value (NAV) is estimated. We believe the above factors would provide relevant differentiation among funds and investors would benefit from more transparency with respect to various fund characteristics.

In addition, the proposed methodology would expand our assessment of the ability and willingness of a third party (usually the fund sponsor) to provide support to a fund. We expect that only funds with creditworthy sponsors would receive ratings at the higher end of the scale under this revised approach. We also anticipate that funds with highly creditworthy sponsors that are deemed likely to support their funds may achieve a rating that is higher than would be implied based solely on the fund's invested portfolio, although uncertainty about support would temper the degree of benefit.

Scope of Application – Constant and Variable NAV Funds

We propose applying the same methodology to rate both constant and variable NAV funds, both in the US and Europe, as long as both fund types pursue the primary objectives of the preservation of principal and the provision of liquidity on demand.

Request for Comment

Market participants are encouraged to send their comments to cpc@moodys.com no later than 5 November. Respondents are requested to note their role in the MMF sector, such as fund manager, investor, trustee, regulator, or other third party. Moody's will consider comments received during this time and potentially make changes to our proposed methodology, after which we will publish a final methodology and begin the process of implementing any associated rating changes. In addition to requesting feedback on any aspect of the proposal and new rating scale, we request feedback on the following questions:

1. Would money markets benefit from fund ratings that provide enhanced information and greater differentiation as we are proposing?
2. Would the approaches proposed and the factors considered, including the relative emphasis on – and calibration of – the different factors, provide a reasonable basis for differentiation among money market funds?
3. Would the use of distinct rating symbols, along with added disclosure about rating drivers, be helpful in highlighting the distinct character of money market funds relative to other competing investments?
4. Can investment managers and other fiduciaries accommodate the proposed ratings within their existing investment guidelines? If not, would the anticipated utility of the ratings lead managers to seek revisions to those investment guidelines to better accommodate the ratings?

Background

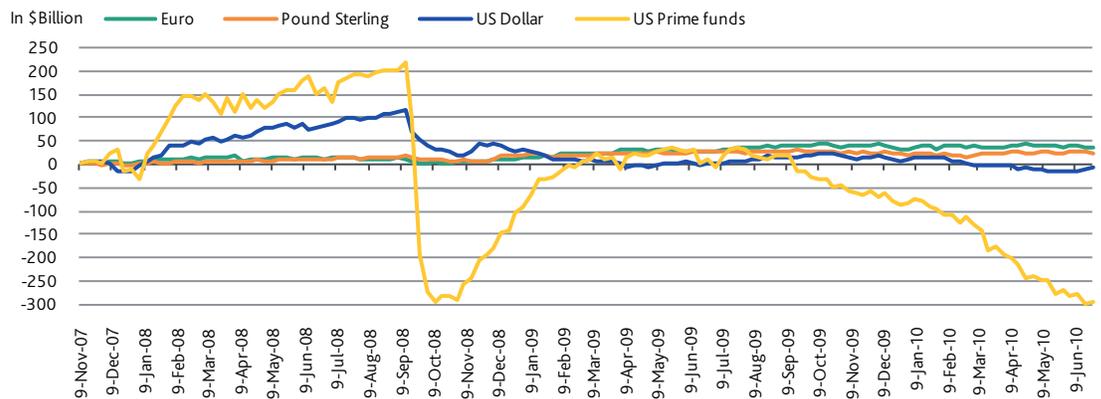
During the recent financial crisis, money market funds were impacted in a manner not seen in their previous almost 36 years of operation. There were an unprecedented number of rating downgrades starting in August 2007, with market volatility, illiquidity, and spread-widening affecting highly rated short-term instruments. In some instances, these factors were compounded by the financial stresses, which peaked during a pivotal two-week period preceding and following the Chapter 11 bankruptcy filing of Lehman Brothers on September 15, 2008. These events contributed to the collapse of the Reserve's Primary Fund and the follow-on imposition of redemption restrictions on 31 money funds in the US and Europe, including 25 funds managed by the Reserve, in light of the rapid and overwhelming redemptions initiated mainly by institutional investors who lost confidence in primary money market funds (see Figure 1).

As a result, money market funds were forced to sell their short-dated securities (which were issued primarily by financial institutions), reallocate portfolio assets, and shorten portfolio durations, thus exacerbating inter-bank funding pressures, increasing rollover risks, and reducing the already diminished appetite for non-financial commercial paper. In response to this spiral, US government authorities introduced in rapid succession three programs specifically geared to stabilize money market funds and restore institutional investor confidence.

According to our research, 62 funds – including 36 funds in the US and an estimated 26 funds in Europe – received financial and balance sheet support from their sponsor or parent company during the financial crisis between August 2007 and December 31, 2009.³

FIGURE 1

Money Market Fund Cash Flows



Source: iMoneyNet

In addition, the number of funds that “broke the buck” and/or suspended redemptions might have been higher without the benefit of sponsor support and government initiatives. This is consistent with data we reviewed in connection with historical events prior to 2007, where losses of value in funds caused them to risk “breaking the buck” or suspend redemptions had it not been for sponsor support.⁴

³ The numbers are largely based on data compiled for the 100 largest prime money market funds only, out of 239 funds, and accounted for 92% of the assets in this segment. Some funds received parental support on more than one occasion, but they are still reported as a single event in this report.

⁴ See “[Sponsor Support Key to Money Market Funds](#),” dated August 9, 2010.

The September 2008 crisis had a significant impact on investors in money market funds. Some, particularly those invested in Reserve Management Funds, suffered payment delays and principal losses. As a result, investors generally have become more sensitive to the differences among money market funds, not just in terms of their asset credit quality and market risk, but also in the degree of exposure to, or insulation from, stress events that could render a fund unable to pay unexpected levels of redemptions. The importance of sponsor support has further been highlighted as a key consideration.

As part of the process of reconsidering our methodology for rating money market funds, we studied those funds that had difficulty meeting their redemption obligations in 2007 and 2008, as well as the effect of previous stress events on money market funds. We analyzed the funds' assets at the time of stress, as well as their liquidity positions, sensitivity to market risk, manager attributes, and their sponsor's ability and willingness to provide support. We also conducted interviews with investors in both the US and Europe and discussed their concerns following the financial crisis, including the type of information and differentiation they would find useful with respect to money market funds. Our research of these historical events and the feedback provided by investors have informed our proposed new methodology.

Proposed New Rating Scale and Rating Definitions

Our proposed ratings would be expressed on a new "MF" (managed fund) rating scale, to differentiate between money market fund ratings and our traditional long-term and short-term credit ratings. We believe that neither our (Aaa-C) long-term credit rating scale nor our short-term (Prime) rating scale would be optimal for rating money market funds for the following reasons: (1) money market funds do not issue debt and investors own shares in the funds; (2) while there is a general expectation by investors of immediate redemption at par, the legal promise is very different, given the qualifications that are included in most money market fund prospectuses and other provisions;⁵ (3) the inherent nature of money market funds, which seek to provide reasonable short-term returns, while also seeking to provide liquidity on demand, yet are exposed to credit, interest rate and liquidity risks with very limited tolerance for mark-to-market deviations; and (4) money market funds' significant susceptibility to systemic risk, as evidenced during the financial crisis. Such differences in investor expectations, in instrument characteristics, and in the influence of systemic factors suggest that a unique rating definition and scale is appropriate.

The proposed money market fund ratings, applied globally, would be defined as representing Moody's assessment of the ability of money market funds to meet the dual objectives of providing liquidity and preserving capital as detailed below:

⁵ For example, U.S. Securities and Exchange Commission (SEC) rule 2a-7 allows funds' boards of directors to suspend redemptions in certain cases.

FIGURE 2

Managed Fund (MF) Rating Definitions

MANAGED FUND RATING	DEFINITION
MF1+	Money market funds rated MF1+ have excellent ability to meet the objectives of providing liquidity and preserving capital.
MF1	Money market funds rated MF1 have very good ability to meet the objectives of providing liquidity and preserving capital.
MF2	Money market funds rated MF2 have good ability to meet the objectives of providing liquidity and preserving capital.
MF3	Money market funds rated MF3 have marginal ability to meet the objectives of providing liquidity and preserving capital.
MF4	Money market funds rated MF4 have weak ability or have failed to meet the objectives of providing liquidity and preserving capital.

Overview of the Proposed Methodology

The proposed methodology would combine an assessment of a fund's portfolio credit profile with an evaluation of its portfolio stability profile and reflect consideration of other factors relating to potential sponsor support and the fund's management, as outlined below.

Portfolio Credit Profile

When benchmarking a fund's portfolio credit quality, we consider the quality of individual securities in the fund as well as the maturity of those investments, reflecting the view that shorter-dated instruments represent less absolute quantum of risk, all else being equal, than longer-dated instruments (i.e., the cumulative expected credit loss curve is upwardly sloping over time). This analysis is accomplished using Moody's Credit Matrix, which is a tool that attributes to each security in the portfolio a specified amount of loss that is derived from: 1) its actual, estimated or derived long-term rating; 2) the expected loss associated with that rating over a one-year timeframe using Moody's long-term idealized loss table; and 3) an adjustment for the security's remaining maturity.⁶ The expected loss for each security is aggregated and corresponds to a theoretical bond rating, which we compare to a benchmark 12-month security at the same rating level.⁷

A schematic showing how, for the purpose of benchmarking a portfolio's credit profile, the expected loss associated with a given security's rating is adjusted for its maturity can be seen in the diagram below. For example, a Aa3-rated security with a 90-day remaining maturity is estimated to represent a similar amount of expected loss as that of a Aa1-rated security with a one-year remaining maturity.

⁶ For more information on the Credit Matrix, see "[Frequently Asked Questions about Moody's Ratings of Managed Funds: Moody's Credit Matrix for Managed Funds](#)," published in March 2006. The report should be read with the proposed modification regarding the reinvestment assumption, as noted above.

⁷ We currently use a benchmark 13-month security, based on the Rule 2a-7 requirement that the maturity of a fund's assets will not exceed 397 days. As part of the proposed new methodology, we plan to change the benchmark to 12 months, which will be more consistent with the 12-month benchmark within our long-term rating spectrum. In any event, the difference between the results under a 12-month benchmark and a 13-month benchmark is minor.

FIGURE 3

Deriving Portfolio Credit Profile

UNDERLYING SECURITY MATURITY (DAYS)	Aaa	Aa1	Aa2	Aa3	A1	A2
30	Aaa	Aaa	Aaa	Aa1	Aa1	Aa2
60	Aaa	Aaa	Aaa	Aa1	Aa2	Aa2
90	Aaa	Aaa	Aa1	Aa1	Aa2	Aa3
120	Aaa	Aaa	Aa1	Aa2	Aa2	Aa3
180	Aaa	Aaa	Aa1	Aa2	Aa3	A1
270	Aaa	Aa1	Aa1	Aa2	Aa3	A1
1 Year	Aaa	Aa1	Aa2	Aa3	A1	A2
2 Year	Aa2	Aa3	A1	A2	A3	Baa1

Note: The chart is based on Moody's Credit Matrix. It assumes that each asset with a maturity below the 12-month benchmark will be reinvested in instruments with the same rating and be rolled to the 12-month point. Assets maturing beyond 12-months are assessed at their respective maturities.

The use of the Credit Matrix in the proposed methodology is consistent with the approach we have historically used with one adjustment. In the proposed methodology, it is assumed that each asset, at maturity, will be reinvested in instruments with the same rating and remaining maturity resulting in greater portfolio expected loss than previously. This continual rollover assumption is more conservative than the liquidation assumption currently used, which assumes that cash from maturing assets is invested in government/treasury securities. The revised assumption introduces greater differentiation into the relative ranking of money market funds and provides more information to investors.⁸

Portfolio Stability Profile

A fund's portfolio credit profile provides information about its maturity-adjusted weighted average credit quality and, therefore, exposure to credit risk. However, money market funds are also susceptible to interest rate and liquidity risks that could adversely affect their principal value and ability to meet liquidity draws on demand. To assess the relative risk of such disruptions, we propose assessing portfolio stability by evaluating the fund's asset profile, the portfolio's liquidity position, and its sensitivity to market risk, using a scorecard to highlight and capture these factors in a consistent way.

Using the scorecard, we would evaluate three key factors that we consider relevant to a money market fund's ability to maintain mark-to-market value and avoid a disruption in its efforts to meet investor redemptions, as outlined below:

⁸ The input to the Credit Matrix, notably the underlying securities ratings, would also be subject to review by a rating committee. The input and/or the Credit Matrix results may be adjusted by a rating committee to reflect the potential changes to credit ratings on review for potential upgrade or downgrade, for unrated securities, and for securities that may be vulnerable to particularly rapid rating transitions.

FIGURE 4

Deriving Portfolio Stability Profile – Scorecard Parameters

FACTOR	WEIGHT	SCORE				
		1+	1	2	3	4
Asset profile	20%					
WAM		<30 days	<60 days	<90 days	<120 days	>120 days
Top 3 obligor concentration		<7.5%	<15%	<30%	<50%	>50%
Fund liquidity	40%					
Overnight Liquidity / Largest 3 investors		>100%	>90%	>75%	>25%	<25%
Overnight Liquidity / Fund AUM		>30%	>20%	>10%	>5%	<5%
7 Day Liquidity / Largest 3 investors		>130%	>120%	>100%	>33%	<33%
Fund exposure to market risk	40%					
NAV stress		> 0.9950	> 0.9900	> 0.9850	> 0.9800	< 0.9800

The goal of the proposed methodology is to differentiate among money market funds based on each fund's intrinsic risk profile and its likely response to market stresses. The values for the parameters we have listed under each factor for a given score are indicative rather than absolute and, as such, are intended to help us determine the relative strengths and weaknesses of money market funds. Nonetheless, while the scorecard provides a framework for thinking about certain fund risks, the final rating outcome is subject to rating committee discussion and adjustments, as appropriate, to reflect the unique characteristics of a fund and its management.

Portfolio Stability – Asset Profile

Our assessment of a fund's asset profile is based on two main measures: the portfolio's WAM and its asset concentration.

WAM is well recognized as a key factor that drives a money market fund's sensitivity to changes in interest rates. It also indirectly affects the fund's liquidity profile and its ability to meet its redemption obligations in the short term.⁹ Assets with shorter-term maturities are normally more liquid given their shorter life cycle and, as such, they would also be easier to liquidate in case of market stress.

The importance of WAM was recognized in recent amendments to the regulation of money market funds in both the US and Europe. In the US, the SEC's Rule 2a-7 under the Investment Company Act of 1940 was modified to limit money market funds' investment criteria so that the portfolio WAM is 60 days or shorter. In Europe, the Council of European Securities Regulators (CESR) recently promulgated a new definition of money market funds.¹⁰ Under the new CESR definition, "Short-Term Money Market Funds" can only have a portfolio WAM of 60 days or shorter. The second

⁹ WAM may not capture the actual maturities of Floating Rate Notes (FRN) because WAM is calculated using an FRN's reset date instead of its maturity date. In cases where a fund holds a meaningful percentage of FRNs, Moody's may decide to use the Weighted Average Life (WAL) of the portfolio instead of WAM in its Asset Profile assessment. WAL calculation is based on the final maturity of such securities, regardless of the reset dates of their interest rates. Rule 2a-7 also includes now a WAL limitation of 120 days.

¹⁰ On 19 May 2010, CESR published the guidelines for a common definition of European money market funds. The Guidelines take effect on 1 July 2011. CESR's Guidelines apply to both collective investment undertakings authorized under the UCITS Directive (2009/65/EC) and to collective investment undertakings that market themselves as money market funds, but are not UCITS-compliant.

category defined by CESR is “Money Market Funds,” which can invest in assets so that the portfolio WAM is limited to six months.

Diversification is one of the key advantages of a money market fund that is expected by investors. Asset concentration is an important factor that may increase the risk of redemption payment disruptions, the risk of higher credit losses in case of liquidation, or market value declines. Concentration could be in several forms, including obligor concentration, security-type concentration, and geographic concentration. Additionally, most money market funds’ portfolios are heavily exposed to the financial sector (mostly to banks), and to specific regions (i.e., the US and Europe), resulting in very small differences among funds on these factors.

Accordingly, to better differentiate between money market funds, the scorecard would focus on measuring the concentration of the top three obligors in fund portfolios. Affiliated obligors of the same corporate family would be counted together, as if they were one, to avoid underestimating an artificial diversification due to multiple legal entities that are all linked to the same parent company.

The asset profile score in the scorecard would be based on an equal weighting of these two factors – WAM and the top three obligor concentration.

Portfolio Stability – Fund Liquidity

Another key factor in a fund’s ability to meet its objective of offering redemptions on demand is its liquidity profile. Our evaluation of liquidity incorporates both the maturity structure and quality of the assets, as well as exposure to the risk of large unplanned redemptions. We would evaluate the degree to which a fund is invested in liquid securities, notably Aaa-rated government securities and their maturities, as well as other liquid assets such as securities with a maturity of less than seven days.¹¹ We would also consider the existence and size of committed, unutilized lines of credit, if any, and any other sources of potential liquidity.

We would then compare the fund portfolio’s liquidity in terms of its granularity relative to its shareholder base and to its AUM. All else being equal, funds with highly liquid assets would have greater ability to meet unexpected redemptions. In addition, a diversified investor base would help to reduce the volatility of outflows that could occur for a fund with a concentrated investor base.

We propose using three liquidity profiles, each measuring a different view of a fund’s ability to meet investor redemptions:

(a) Overnight liquidity + Aaa-rated government securities + committed liquidity lines/Top 3 investors

At the most liquid end of the spectrum, cash-on-hand and cash from maturing securities offer the most reliable source of cash to meet redemptions. We would make additional adjustments for near-cash options such as Aaa-rated governments, which should remain liquid in most market environments (although subject to pricing risk), as well as committed liquidity lines arranged by the sponsor. Beyond these sources of liquidity, a fund may realize impaired price levels in selling assets to meet additional liquidity needs or experience a market shutdown for the portfolio’s illiquid securities. We would compare these liquidity elements with the fund’s top-three investors.

¹¹ For government securities, we would consider whether they are fixed or variable rate; treasury bills or government agency securities; or short-dated versus long-dated government agency securities.

(b) Overnight liquidity + Aaa-rated government securities/Fund AUM

Our second liquidity measure would calculate a fund's overnight liquidity relative to its AUM. This would test the fund's liquidity profile relative to its total assets, regardless of the make-up of its investor base.

(c) 7-Day liquidity/Top 3 investors

Finally, we would consider the varying time element of investor demand. As liquidity challenges can extend beyond a single day, our third liquidity measure would assess available liquidity over a one-week time horizon and compare it again with the fund's top three investors.

In addition to the above three quantitative measures, we would evaluate a fund's investor base and characteristics, which may affect its liquidity. We would expect a fund whose investors are mostly retail to have a very different liquidity/liability profile than that of one with mostly institutional investors. Investor distribution channels, such as portals or omnibus accounts, may also stress fund liquidity, as they may cause multiple investors to act jointly and potentially cause significant unexpected redemptions.

Portfolio Stability – Fund Exposure to Market Risk

Shifts in the marked-to-market value of a money market fund's invested portfolio can also expose it to the risk of loss if investments decline in value or need to be liquidated to satisfy redemptions when the value of invested assets has fallen below amortized cost. Accordingly, as part of assessing a fund's portfolio stability, we also propose analyzing exposure to market risk. The key measure of market risk for both constant and variable NAV money market funds will be a stress test of the expected volatility of a money market fund's mark-to-market NAV, given the type of assets in which it invests. All else being equal, portfolios showing low expected volatility would be rated more highly than those showing high expected volatility. The stress tests would be applied to the mark-to-market value of the portfolio.

The objective of Moody's NAV stress test is to measure a fund's sensitivity to a range of potential market stresses. The parameters for these market stresses are fixed for all funds, such that the stressed fund NAVs can be compared. Moody's NAV stress test is used to compare the impact on a money market fund of a series of correlated stresses, benchmarked to events witnessed during the financial crisis. While these stresses were not seen all at once during the crisis, the objective of our stress test is to rank funds according to their sensitivity to market risk.

The stress tests we will apply to a fund's portfolio are:

- » Yield curve shift (150 bps curve shift across all securities)
- » Credit spread shift (50 bps increase in spread)
- » Illiquidity (additional 50 bps increase in spread for a sub-set of securities considered less liquid)
- » Credit transition (10% of the portfolio would be subject to credit deterioration approximately consistent with a two-notch downgrade)
- » Outflows (40% overnight redemption rate)

The first four stresses would be applied to the value of each asset held by a fund, which would then be re-priced. The fifth stress of a 40% redemption rate would simulate the need to sell at least 40% of a fund's assets in order to meet investor redemptions. The fund's NAV would then be re-calculated and

the resulting stressed NAV would be the basis for the market risk score on the scorecard. The above stress tests are based on historical observations of actual stress events and on certain assumptions related to the impact of such events on the fund's NAV. (See Appendix I for an example of the specific components of this NAV stress test.)

Portfolio Stability Profile – Scorecard Example

The scorecard pulls together the respective data for each element and scores it according to our defined parameters. In many cases, the data elements are sourced directly from the fund portfolio, while in some cases, we derive a particular data element by an additional calculation, such as a liquidity score or NAV stress model. An example of the application of the scorecard to a given fund is shown in the table below, where the individual components combine for an overall score of “2” for fund stability.

FIGURE 5

Example of Deriving Portfolio Stability Profile Scores

FACTOR	WEIGHT	SCORE				
		1+	1	2	3	4
Asset profile	20%					
WAM			57 days			
Top 3 obligor concentration				23.2%		
Fund liquidity	40%					
Overnight liquidity / Largest 3 investors					29.5%	
Overnight liquidity / Fund AUM				15.1%		
7 Day liquidity / Largest 3 investors					47.6%	
Fund exposure to market risk	40%					
NAV stress			0.9932			
Overall Fund Stability Profile	100%					

Combining Portfolio Credit and Stability Assessments

The ratings assigned to a money market fund would be a composite assessment of both its portfolio credit profile and stability profile. While the rating would be a balance of these two underlying assessments, fund stability would carry somewhat greater overall weight. This assessment would be subject to potential further adjustment based on an assessment of the fund management firm, sponsor, and other factors, as discussed later in this report. The indicated ratings based on the combination of these two initial components of the analysis are set out below.

FIGURE 6

Deriving Fund's MF Rating

		PORTFOLIO CREDIT PROFILE				
		Aaa	Aa	A	Baa	Ba
PORTFOLIO STABILITY PROFILE	1+	MF1+	MF1+	MF1	MF2	MF3
	1	MF1+	MF1	MF1	MF2	MF3
	2	MF1	MF1	MF2	MF3	MF4
	3	MF2	MF2	MF3	MF4	MF4
	4	MF3	MF3	MF4	MF4	MF4

For example, to obtain a MF1+ rating, a fund's portfolio stability profile would have to be scored at least "1" as reflected by the scorecard (vertical axis) combined with a Aa (if the score is 1+) or Aaa assessment of the portfolio credit profile (horizontal axis).

Impact of the Fund Manager, Sponsor, and Other Factors

While the indicated result from combining our largely quantitative assessments of a fund's credit and stability profiles would help foster consistency in our analytical approach, it would not alone determine the final money market fund rating. The assigned rating would take into account other information and judgments we believe are relevant to a fund's ability to meet its objectives, including factors relating to the sponsor and management firm. The quantitative analysis of a fund portfolio is necessarily a point-in-time assessment, while the qualitative analysis adds to the rating's predictive ability.

Sponsor Support

Sponsor support has proven to be a key factor in ensuring that certain money market funds meet their objectives to preserve principal and provide liquidity, particularly through periods of volatility in the market generally or in a fund's portfolio specifically. Accordingly, we expect that MF1+ ratings would be achievable only where a fund sponsor's long-term credit profile is generally considered to be of at least single-A quality and/or Prime-1 on the short term rating scale. Similarly, we expect that MF1 ratings would be associated with fund sponsors having an investment-grade credit profile. There may also be certain circumstances where a sponsor does not meet these criteria but, nonetheless, has a sufficiently strong balance sheet, ample credit facilities, has demonstrated effective contingency planning to cover unexpected redemptions and other adverse events, and strong risk management. We would view these sponsors on a case-by-case basis and evaluate them in relation to the type of funds they sponsor.

We would consider the sponsor's liquidity position, including unencumbered cash, cash-like instruments, overnight securities, any other options and committed lines of credit in relation to all the sponsor's liquidity requirements. As we have seen, if one of a sponsor's liquidity funds experiences

problems, it is very possible that other funds it manages will experience similar problems.¹² Without sufficient liquidity, even a motivated sponsor may find it difficult to provide timely support in a stress scenario. We would conduct a credit assessment of an unrated sponsor sufficient to make such a determination of its creditworthiness.

In addition to a fund sponsor's ability to provide support in case of a credit, market, or liquidity event, the rating would be influenced by our assessment of the sponsor's willingness to provide support. Where a sponsor provides a fund with explicit support such as a guarantee or letter of credit, we would review the provisions of those agreements and take them into account in our rating.

In assessing the likelihood of a sponsor providing support in the absence of a contractual agreement, we would consider factors such as the strategic importance of the sponsor's asset management franchise, in general, and its liquidity franchise, in particular. We would also consider the sponsor's track record for supporting its funds. In making this judgment, we would consider the extent to which the failure of a money market fund would likely affect the sponsor's brand name or reputation, thereby creating incentive to provide support to its funds. Finally, we would take into account any limitations – legal, regulatory, or accounting – that could restrict a sponsor's ability to provide support.

Manager Attributes

The attributes of a manager that may lead to a rating lower than otherwise suggested by a fund's portfolio include, notably, its credit process, investment process, control environment, operations quality, and corporate governance as they relate to the fund. The scorecard calibration assumes these attributes are of high caliber. Accordingly, policies and procedures that deviate materially from best practices may result in a lower rating.

Other Considerations

Other factors may also negatively affect the rating. For example, the sponsor itself may be suffering from poor financial performance or significant negative press, which could result in degradation of its management capabilities and/or lead investors to lose confidence in its money market funds. This, in turn, could result in significant redemptions and increase the risk of suspension of redemptions. Poor data and/or lack of transparency, which raises the degree of uncertainty about portfolio composition or management, may also result in a downward adjustment.

A fund's legal documentation, and notably repurchase agreement documentation, may impact the credit quality and liquidity of its assets. Relevant factors that would be considered by Moody's are the creditworthiness of the repo counterparty, the type of permitted collateral, overcollateralization levels, the asset valuation process, and other terms of the repo agreement.¹³

¹² In the absence of a lender of last resort for money market funds, third parties such as sponsors may seek to play this role. However, given the size of some money market funds relative to the means of sponsors, most will be unable to address a run on their money market funds in an illiquid market as was experienced in September 2008.

¹³ Regarding our analysis of repos, see "[Developments in Repurchase Agreements \(Repo\) and Securities Industry Overview](#)," dated August 2005.

Appendix I

The following example outlines specific components underlying the assessment of the fund portfolio's exposure to market risk exposure, assessed as part of the evaluation of portfolio stability and captured in the scorecard.

FIGURE 7

Example of Assessing Market Risk Under the MF Scorecard

NOTE:

Portfolio Base NAV:	(1)		1.0000	
APPLY SHOCK SCENARIO				
		SHOCK	NAV	
Curve Shift	(2)	1.50%	0.0018	NAV reduction
Spread Shift	(3)	0.50%	0.0007	NAV reduction
Illiquid Securities	(4)	0.50%	0.0001	NAV reduction
Rating Transition	(5)	10%	0.0005	NAV reduction
Stressed NAV	(6)		0.9965	NAV impact (modeled in tandem)
Outflow impact	(7)	-40.00%	0.0023	NAV reduction
Stressed NAV with outflows	(8)		0.9942	Total NAV impact (modeled in tandem)

The following notes correspond to each item in the above example:

- (1) Portfolio base NAV – Moody's stress model begins with an assumption that the fund is currently priced at 1.000 NAV. This starting point will be verified and, if warranted, an adjustment will be made, based on the reported mark-to-market value provided by the fund administrator.

Shock Scenarios. The following shocks, reflected in a basis point increase to a security's unadjusted yield, serve to re-price a portfolio.

- (2) Curve shift – A parallel 150 basis point curve shift is applied across all security types and maturities.
- (3) Spread shift – An additional spread is added to credit securities of Aa2 or lower quality. It is adjusted in conjunction with declines in the rating of the underlying security. The spread shift is 50 bps at the Aa2 rating level. Adjustments to lower ratings are based on the relative increase in risk as reflected in Moody's Weighted Average Rating Factor (WARF) for each rating level.
- (4) Illiquidity – As recent market conditions have shown, some asset types are more liquid than others. Accordingly, we haircut by another 50 bps security types that we consider likely to be relatively illiquid in stressed market conditions.
- (5) Credit transition – While a stress event may be due to either market volatility or liquidity, a fund's portfolio remains exposed to the potential for correlated credit deterioration. We address the potential for credit transitions under a stress scenario by selecting at random 10% of the securities

in a portfolio and re-pricing them in line with a two-notch downgrade (of actual or estimated long-term ratings). This adjustment is purely made for market risk assessment purposes and has no bearing on Moody's expectation of rating transitions among the underlying investments.

- (6) Final stressed NAV – On considering the above shock scenarios, Moody's stress model re-prices a fund's portfolio to assess the fund's NAV when faced with all these stress scenarios combined. The combined effect of these stresses on the fund's NAV is greater than the sum of each scenario's impact. This stressed NAV is assessed prior to any outflows.
- (7) Outflow impact – Amid market turmoil, it can be expected that many investors will seek to liquidate their investments. As a result, the unrealized and realized losses to a fund's NAV are borne solely by the remaining investors, so that the negative impact on NAV is exacerbated further.

Moody's Related Research

Rating Methodologies

- » [Moody's Managed Funds Credit Quality Ratings Methodology, July 2004 \(81138\)](#)
- » [Moody's Money Market and Bond Fund Market Risk Ratings, July 2004 \(81135\)](#)

Industry Outlooks

- » [Money Market Funds: 2010 Outlook \(123802\)](#)
- » [Asset Management Industry: 2009 Review and 2010 Outlook \(123358\)](#)

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- » [Sponsor Support Key to Money Market Funds, August 2010 \(126231\)](#)
- » [U.S. Money Funds' Risks are Reduced, But Susceptibility to Liquidity Risk Remains, February 2010 \(122990\)](#)
- » [New European Money Market Fund Definitions Should be Positive for Credit Quality, November 2009 \(120981\)](#)
- » [U.S. Treasury Extends Temporary Guarantee Program for Money Market Funds, December 2008 \(112095\)](#)
- » [Money Market Investor Funding Facility and Other Federal Measures Promote Liquidity in Short-term Markets, November 2008 \(112891\)](#)
- » [Parental Support in Money Market Funds: Moody's Perspective, November 2008 \(112003\)](#)

Rating List

- » [Global Managed Investments: Managed Funds Ratings List, August 2010](#)

Website

- » [Managed Investments on Moodys.com](#)

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