DIVERSIFYING MONEY MARKET FUND RISK WITH SEPARATELY MANAGED ACCOUNTS

A Portfolio Risk Management Approach with the Separate Account Simulator™

Executive Summary

The use of separate accounts to complement money market funds (MMFs) may help optimize risk and reward trade-offs in corporate cash management.

The investments of time and research in establishing a separate account relationship may bring just rewards in times of uncertainty.

Separate Account Simulator™ Results:

1. A 50/50 portfolio of 60-day WAM may provide approximately the same yield potential as the MMF portfolio, while reducing the risk to financial issuers by 50%.
2. The yield give-up of investing 100% in MMF credits vs. 100% in un-MMF™ is roughly 0.05% at a 60-day WAM.
3. The exposure to the top five credits in the FundIQ® composite may be reduced from 21.4% to less than 10% by allocating 60% to the un-MMF™ portfolio.
4. The MMF portfolio yield may be replicated by as little as 40% exposure to the un-MMF™ portfolio with a WAM as short as 90 days and may produce a meaningful reduction in financial risk.

Introduction

Over the last four decades, treasury practitioners have come to depend on the liquidity, price stability and (relatively) attractive yield offered by money market funds. Yet, there is no denying that prime institutional money market funds entail risk. How one manages credit risk in these funds has been a topic of great interest for most practitioners since the financial crisis of 2008.

While the debate over future fund regulations may continue, it is beyond doubt that money market funds serve a vital function in the treasury community and rightfully so. Meanwhile, investing in prime funds is a

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calculated risk-taking activity. The ultimate goal for many practitioners is to preserve the benefits of the funds while reducing their risk. We attempt to demonstrate an approach to reduce risk by building a portfolio of securities that are not held by prime money market funds.

Difficulties in Understanding Money Market Fund Risk

In our two decades of experience managing corporate cash investments, we have found that credit risk within money market funds is not well understood because it is not a constant concept. Funds take on more or less risk in response to market conditions, regulatory changes and shareholder concerns. Even if a fund does nothing, its risk may rise and fall with what goes on around it. Behavioral changes that cause funds to be safer today may cause them to be riskier tomorrow.

On a daily basis, risk may be invisible to the untrained eye. Regularly priced at $1.00 per share, money market funds do not reveal the daily price swings of their underlying securities unless such swings result in the market value per share to fall below $0.995, the breaking point for the stated price. In other words, you may not see trouble coming until it is right before your eyes.

We also know that funds may get into trouble for reasons not directly related to the securities they hold, as shareholders may rapidly sell shares into a sinking market and worsen a liquidity squeeze. Even advanced analytical models have trouble telling us the odds of a bystander getting caught in this firefight.

Recognizing the inherent risks in money market funds, practitioners may do well to reduce their exposure to the areas that most concern them. When investors are unable to find a fund that matches their criteria, they may try a portfolio approach, blending existing fund assets with a separately constructed portfolio of un-correlated securities. We call it the Portfolio Risk Management approach, and label it the “un-MMF™” portfolio. The un-MMF™ portfolio consists of government, corporate and asset-backed securities. Unlike MMFs, we exclude the top 50 non-government issuers with the largest aggregate concentrations across the 15 AAA-rated prime institutional money market funds tracked by FundIQ®, our credit research and risk analytical tool.

Benefits of a Portfolio Risk Management Approach

Keep Your Existing Funds: With a portfolio approach, investors do not need to make an "either/or" choice between their fund investments and separate account assets. They will continue to benefit from the liquidity and convenience offered by the MMFs, and there is no need to change bank relationships or forgo their earned credit rates.

Modify Your Credit Exposures As You Wish: While investors may have a limited say on credit concentration in MMF portfolios, they may change their overall exposure to certain investments by selecting or deselecting those names in the un-MMF™ portfolio. This is especially true today, when many investors feel over-concentrated in some financial institutions as they also may have the same credit exposure in areas such as foreign exchange and trade finance.

Pick Your Own WAM: Government regulations have reduced the maximum weighted average maturity (WAM) of a money market fund from 120 days to 60 days over the last two decades. The reduction in WAM has significantly reduced the income potential for fund investors by limiting the opportunities otherwise available to them. With a portfolio approach, investors may attain a WAM target appropriate for their specific needs. They also may change their WAM targets independent of the fund managers to express their own views on interest rate changes, when appropriate.

Simulating the un-MMF™ Portfolio

To illustrate our portfolio approach, we use an internally developed Separate Account Simulator™ to construct several variations of the un-MMF™ portfolio.

MMF Portfolio: For control purposes, we first identify the top 50 non-government issuers with the largest concentrations in the FundIQ® universe as of August 31, 2012 (See Appendix 1). Our Separate Account Simulator™ then uses these top 50 issuers to construct a portfolio with an 80% concentration in financials, a 20% concentration in non-financials and a 60-day WAM. Based on publicly obtained security prices as of September 19, our Separate Account Simulator™ gives us a MMF portfolio with a gross yield of 0.22%. We will compare this portfolio to our un-MMF™ portfolio.

Characteristics of the MMF Portfolio:
WAM – 60 Days
Allocation – Financial 80%, Non-Fin 20%, Gov't 0%
Gross yield (9/19/12) – 0.22%

un-MMF™ Portfolio Categories: We consider three broad asset categories in the un-MMF™ portfolio to diversify from the financial issuer-centric MMF portfolio: government, non-financial and asset-backed securities (ABS).

Government: *U.S. Treasury, Fannie Mae, Freddie Mac and Federal Home Loan Banks debt.*
Non-financial: *Top 20 issuers in the Merrill Lynch 1-3 Year Corporate Index with a minimum Moody's credit rating of A3 (See Appendix 2).*
ABS: *AAA tranches of the six largest prime credit card master trusts (Citi, BofA, Chase, American Express, Capital One and Discover).*
Allocation with ABS: *Gov't 0%, Non-Fin 80%, ABS 20%*
Allocation without ABS: *Gov't 20%, Non-Fin 80%, ABS 0%*

Simulation A - Yield Impact in a 50/50 Portfolio
Combining the simulated MMF portfolio, a 60-day WAM yielding 0.22%, with the un-MMF™ portfolio, we can calculate the combined portfolio yield and WAM in the six different scenarios presented in Table 1. For our first simulation, we assume a 50%/50% mix of the two.

Table 1: Portfolio WAM and Yield Distribution

MMF Portfolio	un-MMF™ Portfolio				Combined Portfolio		
	WAM	Yield W/ABS	Yield W/O ABS		WAM	Yield W/ABS	Yield W/O ABS
50%	**50%**				**100%**		
60-Day WAM 0.22% Yield	30	0.19	0.15		45	0.21	0.19
	60	0.22	0.17		60	0.22	0.20
+	90	0.24	0.18	=	75	0.23	0.20
	180	0.31	0.23		120	0.27	0.23
	270	0.38	0.29		165	0.30	0.26
	360	0.42	0.32		210	0.32	0.27

Understandably, yield levels for the combined portfolio are less than 0.22% at low WAM levels due to the absence of (arguably riskier) financial names, thus achieving the credit risk diversification objective. As WAM increases, the combined portfolio starts to outperform the MMF Portfolio. The ABS portfolio starts to outperform at 75-day WAM, yielding 0.23%, while the breakeven point for the non-ABS portfolio is at 120-day WAM, yielding 0.23%.

Think of the data in Table 1 as a simple illustration of the tradeoffs between credit and interest rate risk decisions. Determining the WAM level of the combined portfolio is an individual decision, and it should include near-term interest rate projections. Notwithstanding the accuracy of the simulated results, the table can be used as a starting point for strategic portfolio allocation decisions. Note that this portfolio has 50% in overnight liquidity through the MMF portfolio, so the longer WAM does not necessarily impede overall liquidity.

Simulation B - Yield Impact from a 60-Day WAM Portfolio

For investors who do not wish to venture beyond the current 60-day WAM, Table 2 shows the yield impact from six different portfolio allocations. By moving from investing 100% in MMFs to 100% in un-MMF™, the yield give-up is roughly 0.05%. The table reflects the un-MMF™ portfolio without allocation to ABS.

Table 2: Yield Impact from Portfolio Allocation, 60-day WAM (w/o ABS)

% in MMF Portfolio						
100%	0.22					
80%		0.21				
60%			0.20			
40%				0.19		
20%					0.18	
0%						0.17
% in un-MMF™ Portfolio	0%	20%	40%	60%	80%	100%

Think of the data in Table 2 as an illustration of the cost-benefit analysis of using financial credits in a "MMF-like" cash portfolio. The 0.05% yield give-up from one extreme to the other may help investors decide on a level acceptable to them. Again, results may vary in real portfolios, but the analytical approach may be useful in making informed decisions.

Simulation C - Reduced Exposure to Top Credits

The portfolio approach may help investors customize their tolerance to the top MMF credit exposures. For example, our FundIQ® research shows the top five non-government issuers (all of which are financial institutions) in the 15 constituent funds make up 21.4% of the entire portfolio as of August 31, 2012[i]. Table 3 shows how one may use the un-MMF™ portfolio to reduce such exposures.

Table 3: Concentration Risk in Top 5 Credits

% inMMF Portfolio \ % in un-MMF™ Portfolio	0%	20%	40%	60%	80%	100%
100%	21.4					
80%		17.1				
60%			12.8			
40%				8.5		
20%					4.3	
0%						-

Data in Table 3 shows that by moving 40% towards the un-MMF™ portfolio, an investor effectively can reduce concentration risk to the top five financial names to 12.8% from 21.4%. Investors can further reduce exposure to credits with the largest concentrations by taking into consideration the WAM distribution of these issuers.

Simulation D - Active WAM and Allocation Management

Taking the simulated strategy one step further, cash investors may combine portfolio allocation and WAM targets in the un-MMF™ portfolio to achieve potential credit risk reduction and yield pickup. Table 4 provides the potential yield distribution that may be attained by changing these decisions for the portfolio with and without ABS. The shaded areas represent the potential yield advantage to the baseline MMF portfolio, which yielded 0.22%.

Table 4: Active Portfolio Allocation and WAM Management

un-MMF™ Portfolio WAM	% in un-MMF™ Port (without ABS)					
	0%	20%	40%	60%	80%	100%
30	0.22	0.21	0.19	0.18	0.16	0.15
60	0.22	0.21	0.20	0.19	0.18	0.17
90	0.22	0.21	0.20	0.20	0.19	0.18
180	0.22	0.22	0.22	0.23	0.23	0.23
270	0.22	0.23	0.25	0.26	0.28	0.29
360	0.22	0.24	0.26	0.28	0.30	0.32

un-MMF™ Portfolio WAM	% in un-MMF™ Port (with ABS)					
	0%	20%	40%	60%	80%	100%
30	0.22	0.21	0.21	0.20	0.20	0.19
60	0.22	0.22	0.22	0.22	0.22	0.22
90	0.22	0.22	0.23	0.23	0.24	0.24
180	0.22	0.24	0.26	0.27	0.29	0.31
270	0.22	0.25	0.28	0.32	0.35	0.38
360	0.22	0.26	0.30	0.34	0.38	0.42

The upper half of Table 4 shows that, for investors unwilling to use ABS, an allocation of 60% to the un-MMF™ portfolio with a 180-day WAM will achieve higher yield potential than the MMF portfolio. Likewise, investors willing to use ABS may outperform the MMF portfolio with a 40% allocation to the un-MMF™ portfolio and a 90-day WAM.

Summary Findings from Portfolio Simulations

We summarize the results from the four simulations here:

1. A 50/50 portfolio with a 60-day WAM may provide approximately the same yield potential as the MMF portfolio, while reducing the risk to financial issuers by 50%.
2. The yield give-up of investing 100% in MMF credits vs. 100% in un-MMF™ is roughly 0.05% at a 60-day WAM.
3. The exposure to the top five credits in the FundIQ® composite may be reduced from 21.4% to less than 10% by allocating 60% to the un-MMF™ portfolio.
4. The MMF portfolio yield may be replicated by as little as 40% exposure to the un-MMF™ portfolio with a WAM as short as 90 days and produce a meaningful reduction in financial risk.

Conclusions – The Arguments for a Portfolio Risk Approach

To conclude, let's revisit the premise of this commentary – cash investors may reduce credit risk in their money market fund investments with a customized separate account portfolio not correlated to their MMF investments.

While simulated results may have real-world limitations, treasury investors may find it helpful to take a portfolio approach to their investments. This approach may offer the flexibility they need without having to change their existing investment strategies and fund partners.

The portfolio approach becomes more valuable in the current environment, when funds struggle to provide positive yield due to limited eligible investments and regulatory uncertainty. Corporate investors' large accumulated cash balances and large exposure to financial firms elsewhere in their organizations emphasize the need for a diversified strategy to limit risk and expand opportunity sets.

Appendix 1:
Top 50 Non-Government Issuers in the FundIQ® Composite
As of August 31, 2012

ABN Amro	MetLife
Credit Agricole	Mizuho
Australia and New Zealand Bank	Morgan Stanley
Bank of America	Mitsubishi UFG
Barclays Bank PLC	National Australia Bank
BB&T	Natixis
Bank of Montreal	National Bank of Canada
BNP Paribas	Nordea
Bank of Nova Scotia	Norinchurin Bank
Citigroup	NRW
Commonwealth Bank of Australia	PNC
CIBC	Rabobank
Credit Suisse	Royal Bank of Canada
Deutsche Bank	Royal Bank of Scotland
Development Bank of Singapore	SEB Bank
DNB Bank ASA	Societe Generale
Erste Bank	Sumitomo Mitsui
FMS Wertmanagement	Standard Chartered
General Electric	Svenska
Goldman Sachs	Swed Bank
HELEBA	Toronto Dominion
HSBC	Toyota
ING Bank	U.S. Bancorp
J.P. Morgan Chase	Westpac Bank
Lloyds TSB Bank PLC	Wells Fargo

Appendix 2:
Top 20 Issuers in Merrill Lynch 1-3 Year Corporate Index
As of August 31, 2012
(Minimum Rating of A3 by Moody's)

AT&T
BHP
BP PLC
Chevron
Cisco
Conoco
Daimler AG
GlaxoSmithKline
HP
IBM
Anheuser-Busch InBev
Microsoft
Novartis
Oracle
PepsiCo
Pfizer
RIO Tinto
Roche
Shell Royal Dutch
Verizon

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[i] As of August 31, 2012, the top five non-government issuers in the FundIQ® composite are Barclays (4.9%), Sumitomo Mitsui (4.3%), Mitsubishi UFG (4.3%), Deutsche Bank (4.1%) and J.P. Morgan Chase (3.8%).