

Quantifying Liquidity Premium of Money Market Funds in the Low Yield Environment, Part II

How to Put Excess Cash to Work without Increasing Credit Risk

Abstract:

This paper attempts to quantify the impact of a liquidity premium in money market funds by modeling three hypothetical portfolios of 29, 60, and 121-day weighted average maturities (WAM). Through our modeling process, we found the WAM extensions would have resulted in 0.11% and 0.31%, respectively, of additional annual yield potential over the 29-day WAM portfolio. The premise of the exercise is that by using separately managed accounts of custom maturities, investors may be able to recuperate part of the reduced yield caused by the more stringent liquidity requirements of the revised 2a-7 rule.

Introduction:

In our May 2010 newsletter, we estimated the typical U.S. prime money market fund would relinquish approximately eight basis points (0.08%) due to the recent SEC 2a-7 rule changes. This simulated “liquidity premium” was computed on a hypothetical prime fund with actual industry data for the previous 110 months.

Since the publication of that article, we received requests to test the methodology in the current low yield environment instead of looking at an historical average. We felt this was a reasonable request as more investors are seeking new ways to improve their portfolio yield without taking on undue risk. One sensible approach may be a do-it-yourself approach to relax the more stringent SEC liquidity requirements in a separately managed account format.

In this update, we will address the here-and-now question: If one were to keep a portfolio’s credit risk characteristics comparable to prime money funds and increase the average portfolio maturity (WAM) to 60 or 120 days, what is the expected yield pickup today? Is it worth risking keeping the funds in longer term securities instead of leaving them in a money fund?

Published: August 2, 2010

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The Benefit and Cost of Shared Liquidity:

Despite recent investor concerns, money market funds have had tremendous positive impact on corporate cash management. In addition to the convenience of historically maintaining a \$1 net asset value, professional fund management, and cost savings from economies of scale, same day funds availability provides the peace of mind to treasury professionals faced with unforeseen liquidity needs.

Meanwhile, every benefit has its associated costs. For money market funds, shared liquidity and same day availability shift the responsibility of managing unforeseen liquidity needs from individual investors to the fund manager. Industry fund flows in the weeks after the Reserve fund debacle in 2008 illustrated the downside risk of shared liquidity and same day availability. Not surprisingly, many of the provisions in the revised 2a-7 rule are geared towards making money funds more liquid: such as shorter WAM, specific requirements for overnight and 7-day liquidity, as well as less illiquid and lower-rated securities in fund portfolios.

As we have published in several past newsletters, the direct cost of more liquid money funds, all else being equal, is a lower expected yield. In the post-revised 2a-7 era, we see the evidence of shifting interest toward separately management accounts. Investors are more cognizant of missed yield opportunities in leaving all of their cash in an overnight vehicle, and are employing “liquidity budgeting” practices to move a portion of their cash portfolios to alternative channels, including separate accounts. The current low yield environment, of course, is somewhat negating that trend. However, we want a comparative yield analysis of quasi-money fund portfolios with WAMs of 30, 60 and 120 days to give investors a general sense of where yields are in today’s environment. We should note that a portfolio of laddered maturities in addition to shared liquidity vehicles can be an effective risk management tool in addressing potential runs on the funds.

Portfolio Construction:

To conduct our yield analysis, we start with the aggregate portfolio composition as of 6/30/2010 from 15 large AAA-rated prime money funds tracked by FundIQ, a research service provided by Capital Advisors Group¹. This aggregate portfolio of \$493 billion represents roughly 50% of prime institutional money fund assets in the United States². The portfolio WAM and the weighted average life (WAL) of each sector are then used to construct our three sample portfolios: the base-case 30-day WAM portfolio, the extended 60-day WAM portfolio, and the enhanced 120-day WAM portfolio.

Exhibit 1: Aggregate Portfolio of 15 Large AAA-rated Prime Funds (as of 6/30/2010)

TYPE	% PORT	WAL (Days)
Gov't Repos	10%	4
Time Deposits	10%	2
U.S. Treasuries	3%	100
GSE	8%	176
Financial Debt	52%	61
Non-Financial Debt	2%	72
Asset-backed CP	10%	33
Municipal Debt	3%	8
Sovereign Debt	2%	68
	100%	56
Net Yield		0.17%
Average WAM		30

*See footnote 1 for details.

Base-case Portfolio: Our first step is to construct a sample portfolio imitating the characteristics of our 15-fund peer group which had a net 7-day yield of 0.17% and WAM of 30 days as of June 30, 2010. To make the portfolio look realistic and be able to use publicly available bond indices with standardized maturities, we modified the aggregate portfolio's WAL to get our sample portfolio WAM of 29 days. We then take the average daily sector yield³ and associated maturity in June 2010, and apply the portfolio weights to arrive at the portfolio yield of 0.24% (See [Exhibit 2](#) below). Note that this portfolio has the same sector weights as the aggregate portfolio. Also, the gross yield on the sample portfolio is 0.07% higher than the actual yield for the aggregate portfolio. We applied this methodology evenly to the other sample portfolios, to achieve a relevant yield spread between them, rather than trying to artificially match the yield on the hypothetical portfolio to the peer group.

Exhibit 2: Average Yield of a 29-day WAM Portfolio in June 2010

TYPE	% PORT	SAMPLE PORTFOLIO		AVG YIELD	
		MATURITY	WAM	Sector	Port
Gov't Repos	10%	1	0.1	0.11%	0.01%
Time Deposits	10%	1	0.1	0.33%	0.03%
U.S. Treasuries	3%	90	3.1	0.12%	0.00%
GSE	8%	60	4.9	0.14%	0.01%
Financial Debt	52%	30	15.6	0.24%	0.12%
Non-Financial Debt	2%	60	1.2	0.24%	0.00%
Asset-backed CP	10%	30	2.9	0.36%	0.03%
Municipal Debt	3%	7	0.2	0.29%	0.01%
Sovereign Debt	2%	60	1.0	0.20%	0.00%
	100%		29		0.24%

*See footnote 3 for sector yield information.

Extended WAM Portfolio: Our second portfolio is almost identical to the first one, except that financial debt purchases are extended from 30 days to 90 days, which results in the portfolio WAM of 60 days. This exercise is conducted to show the impact on yield if one were to construct a portfolio in the spirit of the 2a-7 rule but is less concerned with the adverse effect of longer maturities on unplanned liquidity needs. [Exhibit 3](#) below shows this simple extension would have produced a 0.35% weighted average yield in June, a 0.11% improvement over the base-case portfolio.

Exhibit 3: Average Yield of a 60-day WAM Portfolio in June 2010

TYPE	SAMPLE PORTFOLIO			AVG YIELD	
	% PORT	MATURITY	WAM	Sector	Port
Gov't Repos	10%	1	0.1	0.11%	0.01%
Time Deposits	10%	1	0.1	0.33%	0.03%
U.S. Treasuries	3%	90	3.1	0.12%	0.00%
GSE	8%	60	4.9	0.14%	0.01%
Financial Debt	52%	90	46.8	0.46%	0.24%
Non-Financial Debt	2%	60	1.2	0.24%	0.00%
Asset-backed CP	10%	30	2.9	0.36%	0.03%
Municipal Debt	3%	7	0.2	0.29%	0.01%
Sovereign Debt	2%	60	1.0	0.20%	0.00%
	100%		60		0.35%

*See footnote 3 for sector yield information.

Enhanced WAM Portfolio: The third and last portfolio is what we call an enhanced portfolio with a WAM of 121 days. For this portfolio, we assume liquidity is provided by planned maturities and leaves no liquidity buffers for unplanned needs. One can interpret it as a supplemental “yield-enhancing” portfolio over and above a liquidity vehicle such as a money market fund. Note that from its inception in 1983 to the first major revision in 1991, the SEC’s 2a-7 rule maintained a maximum WAM requirement for U.S. money funds of 120 days⁴.

In [Exhibit 4](#) on page 5, we remove portfolio weights to short-dated sectors and increase maturities to the rest of the sectors. Note that interest rate risk remains modest in this portfolio given the 180-day final maturities in securities and the market expectations of no Fed tightening in 2010. The average yield produced by this sample portfolio would have been 0.55% in June based on index pricing, an improvement of 0.20% over the extended portfolio and 0.31% over the base-case portfolio.

Exhibit 4: Average Yield of a 121-day WAM Portfolio in June 2010

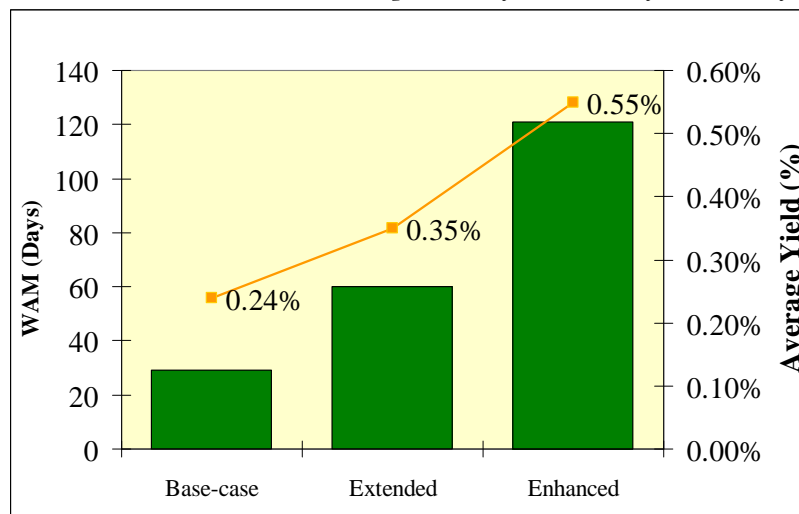
TYPE	SAMPLE PORTFOLIO			AVG YIELD	
	% PORT	MATURITY	WAM	Sector	Port
Gov't Repos	0%	n.a.			
Time Deposits	0%	n.a.			
U.S. Treasuries	10%	180	6.1	0.19%	0.02%
GSE	10%	180	14.7	0.25%	0.03%
Financial Debt	50%	180	93.6	0.66%	0.33%
Non-Financial Debt	20%	180	3.6	0.65%	0.13%
Asset-backed CP	10%	30	3.0	0.49%	0.05%
Municipal Debt	0%	n.a.			
Sovereign Debt	0%	n.a.			
	100%		121		0.55%

*See footnote 3 for sector yield information.

Conclusions:

To sum up the results of our three sample portfolios, the extension of WAM from 29 days to 60 and 121 days would have produced 0.11% and 0.31%, respectively, in incremental annualized yield in June 2010, while holding other risk factors constant. Even in the current low yield environment, the additional yield potential may be substantial for certain investors setting aside a portion of their balances in separate accounts of laddered maturities.

Exhibit 5: WAM and Yield Comparison of Three Portfolios (As of June 30, 2010)



In the context of managing overall liquidity needs of a treasury function, institutional investors need to be aware of the benefits and opportunity costs of shared liquidity vehicles, and be well advised on the benefits and challenges of separately managed

accounts with longer WAM parameters. Since both involve costs and benefits and are not mutually exclusive, we believe that these options should be viewed in a complementary fashion in the overall liquidity management strategy.

¹ This aggregate portfolio is compiled with individual holdings lists from 15 of the largest AAA-rated prime money market funds tracked by FundIQ, a service provided by Capital Advisors, as of June 30, 2010. The list of the funds is provided below. Bank certificates of deposits, bonds and commercial paper of financial institutions are aggregated into financial debt. Bank and financial debt guaranteed by non-U.S. government entities are classified as sovereign debt. WAL refers to weighted average life, or weighted average final maturities of securities.

TICKER	RATING	NAME
N/A	AAA/Aaa	AIM STIT Liquid Assets - Institutional
TMPXX	AAA/Aaa	BlackRock TempFund - Institutional
NRXX	AAA/Aaa	Columbia MM Reserves - Institutional
DICXX	AAA/Aaa	Dreyfus Cash Management - Institutional Shares
ICAXX	AAA/Aaa	DWS MM Series - Institutional
POIXX	AAA/Aaa	Federated Prime Obligations - Institutional Shares
FIPXX	AAA/Aaa	Fidelity Institutional Prime Money Market Portfolio
FPZXX	AAA/Aaa	First American Prime Obligations Class Z
FPOXX	AAA/Aaa	Goldman Sachs Financial Square Prime Obligations - Institutional
JINXX	AAA/Aaa	JPMorgan Prime Money Market Institutional
MPFXX	AAA/Aaa	Morgan Stanley Institutional Liquid Prime Fund
SVPXX	AAA/Aaa	SSGA Prime Money Market Fund
SELXX	AAA/Aaa	UBS Select Prime Money Market - Institutional
PIIXX	AAA/Aaa	Wells Fargo Advantage Prime Investor MM - Institutional
CFRXX	AAA/Aaa	Western Asset Citi Institutional Cash Reserve

² Fund and industry size figures come from iMoneyNet's Money Fund Analyzer data service as of June 30, 2010.

³ Bond indices and their sources for June 2010 are listed below. Yield information is obtained from Bloomberg on the respective indices for the month of June and then averaged.

Maturity (Days)	TYPE	Bloomberg Code	Source
1	Gov't Repos	RPGT01D	Bloomberg
1	Time Deposits	DCDB1D	Bloomberg
7	Municipal Debt	MUNIPSA	SIFMA
30	ABCP A1+/P1	ACPA030Y	Bloomberg
30	Financial Debt	H15F030Y	Federal Reserve
60	GSE	AGDN060Y	Bloomberg
60	Non-financial Debt	H15N060Y	Federal Reserve
60	Sovereign Debt	KfW	CAG
90	U.S. Treasuries	TBSM3M	Federal Reserve
90	Financial Debt	H15F090Y	Federal Reserve
180	U.S. Treasuries	TBSM6M	Federal Reserve
180	GSE	AGDN180Y	Bloomberg
180	Financial Debt	DCPA180Y	Bloomberg
180	Non-financial Debt	CO016M	Bloomberg

⁴ Peter G. Crane, US Money Market Funds: A Regulatory Success Story, GTNews website, November 28, 2006, <http://www.gtnews.com/article/6564.cfm#request.location#>

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