February 6, 2013

Re: Docket # FSOC-2012-0003

Dear FSOC:

Here are my comments on the proposed recommendations regarding money market mutual funds:

Summary:

- Short-term funding markets will be affected by the next financial crisis, even if money market funds did not exist. Public policy should address the best method for providing a lender of last resort to the commercial paper and repo markets as well as banks.
- Orderly “walks,” in which even large redemptions from money market funds are less than the cash flows from maturing assets, do not threaten financial stability as much as disorderly “runs” that create forced selling of financial instruments. The increased liquidity requirements of the 2010 reforms significantly reduced the likelihood that funds would be forced to sell assets prior to maturity.
- Gates that permit funds to slow redemptions without liquidating the funds in times of stress transform destabilizing runs into orderly walks and thus remove systematic risk.

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1 I am also on the boards of directors of the EDGA and EDGX stock exchanges. My comments are strictly my own and don’t necessarily represent those of Georgetown University, the University of Pennsylvania, EDGX, EDGA, or anyone else for that matter.
Discretionary sponsor support has been and will continue to be quite effective, as a sponsor’s entire money management business will end if it allows a MMMF to break the buck. Making sponsor support explicit causes accounting and capital requirements problems.

Requiring sponsors to release financial information, similar to SEC Rule 17a-5 for broker dealers, would let investors know which sponsors are too small to support their funds.

Amortized cost accounting is appropriate. Mark-to-market accounting falsely assumes that market prices are perfectly accurate even in a time of financial panic. Use of inaccurate market prices for high quality financial instruments in a panic is destabilizing to the economy.

Many of the proposed reforms would seriously reduce the attractiveness of MMMFs. This could increase, not decrease, systemic risk as assets move to too-big-to-fail banks. The proposed reforms will cause serious economic damage to some parts of the economy for no benefit.

MMMFs should have the voluntary ability to experiment with various credit enhancements, such as the Harris proposal, buffer shares, or other types of credit enhancements. They should be able to reflect such credit enhancements in their marketing.

IRS should relax tax regulations to permit MMMF earnings and sponsor support to replenish depleted NAVs.

If capital requirements or buffers are imposed, they should be risk-based with zero capital or buffer required for any holdings less than 0.5% of assets and should permit alternative credit enhancements such as third party guarantees and CDSs to substitute for expensive capital.

Background: Short-term funding markets are vulnerable to disruption even if money market funds did not exist.

A top-rated issuer of commercial paper unexpectedly files for what becomes the largest bankruptcy to date in U.S. history. As this commercial paper had been rated prime just days before the bankruptcy, investors lose faith in the reliability of credit ratings and stop purchasing top-rated commercial paper from other issuers. Issuers reliant upon commercial paper have difficulty funding their activities. The Fed steps in and takes several emergency actions to prevent the crisis from spinning out of control.

Sound familiar?

This happened in 1970 when the Penn Central Transportation Company, one of the nation’s largest railroads at the time, filed for bankruptcy. The impact of a sudden collapse of a top-rated issuer of

commercial paper caused a runoff in the commercial paper market, which shrank approximately 10% in a month. The Fed stepped in by opening the discount window and relaxing various regulations. **Note that this occurred before money market funds had been invented.**

It happened again in the Panic of 2008, when Lehman Brothers filed for bankruptcy on September 15, 2008. Lehman’s commercial paper had been rated in the top category by both Moody’s and S&P shortly before the bankruptcy. The Reserve Fund, the nation’s first money market mutual fund, held more than 1% of its assets in Lehman commercial paper and consequently “broke the buck.” Investors in the fund eventually did get back more than 99 cents on the dollar. Significant redemptions hit several other prime money market funds, adding to stresses in the short-term funding markets.

Although the Fed took steps to backstop the commercial paper markets similar to 1970, on September 19, 2008 Treasury created a guarantee fund for money market funds with some creative and questionable uses of the Exchange Stabilization Fund. Whether this was needed is still open to debate. It is clear that there was so much going on at that time, that Treasury had little time to think through the details of its various responses, such as the initial TARP plan to buy up all the “toxic” assets. Congress took away this particular use of the Exchange Stabilization Fund, and now the FSOC is considering how to deal with the next short-term funding crisis.

The reality is that short-term funding markets such as the commercial paper market and the repo market are always vulnerable to disruption. It happened in the Great Depression. In a financial crisis, there is an inevitable flight to quality. One of the hallmarks of a financial crisis is the widespread loss of confidence in the information regarding credit quality in the market. Credit risk degenerates from the “known unknowns” of readily ascertainable credit quality to the “unknown unknowns” of widespread uncertainty. In the recent crisis, it became clear that the rating agencies could not be trusted and it was not clear who was solvent and who wasn’t. In that environment, investors rightly conclude that it is not worth the risk of major loss or illiquidity just to earn the few extra basis points one normally gets from commercial paper or repurchase agreements.

When the next financial crisis occurs (and this is a when, not an if), there will be a similar flight to quality, **even if money market funds do not exist.** The important public policy question for the FSOC is to determine the best way to provide an appropriate lender-of-last resort to both bank and non-bank short-term funding markets. This is rather straightforward for issuers of commercial paper: They all maintain backup lines of bank credit for just such emergencies. The FSOC should investigate the anecdotal reports of some banks’ reluctance to honor their backup credit lines during the Panic of 2008.


A general increase in bank lending caused by the utilization of these backup lines of credit will increase bank balance sheets and thus increase bank funding requirements. This strain can easily be met with traditional Fed activities such as the discount window and open market activities. Such an increase in bank lending will also put a strain on bank capital ratios, potentially reducing the ability of banks to make other important loans to creditworthy borrowers. This strain can also be met with appropriate Fed action to provide favorable treatment to such high quality backup loans with respect to bank capital ratios.

**Public policy needs to distinguish between orderly walks and destabilizing runs.**

The FSOC is rightly concerned about disruptions to financial markets resulting from a wave of investor redemptions that force MMMFs to sell assets in a way that destabilizes financial markets. Such a run clearly has systemic implications. A fund facing a run because it holds some distressed paper may not be able to sell the distressed paper at its fair value in a panic, so it will likely sell other assets, thus transmitting the dislocation to other instruments.

Many of the holdings of MMMFs are designed to be held until maturity. The panic selling of such financial instruments will result in inaccurate “fire-sale” prices that will lead to inaccurate mark-to-market write downs. Such inaccurate write-downs then threaten the apparent solvency of other money market mutual funds as well as other financial institutions. Such a disruption in the market will also make it difficult for legitimate borrowers such as governments and solvent businesses to borrow money on reasonable terms.

However, there is a major distinction between the disorderly forced selling of illiquid financial instruments prior to maturity in a run, and the orderly payment of redemptions funded solely from the natural cash flows that occur upon maturity – a walk. Think of the difference between a fire-induced panic in a crowded theater and the normally safe and orderly exit that occurs after a routine performance. If net redemptions from a money market fund are less than the cash flows that result from the natural maturity of its holdings, then the fund does not have to sell any holdings prior to maturity. **If funds are not forced to sell holdings prior to maturity, then there is no disruption and thus no systemic risk.**

It should be noted that the SEC’s 2010 reforms substantially increased the liquidity of money market funds by requiring 10% “daily liquidity” and 30% “weekly liquidity.” In other words, 10% of the funds’ assets have to mature into cash daily, and 30% within a week. The SEC also shortened the permitted weighted average maturity of fund assets. This significantly reduces the likelihood that excessively large fund redemptions will force selling of fund assets prior to maturity.

**The FSOC has provided no evidence, and there is none, that orderly walks threaten the stability of the financial system.**

It is clear that the forced selling of illiquid financial instruments into a panicky market is destabilizing. It is also clear that the predictable and planned maturities of standard financial instruments in the normal course of business are not. If a wave of redemptions hits a fund, but it meets those redemptions through
the natural maturity of its investments, then it does not have to sell any assets into a fragile market. Thus, there is no disruption.

In order to justify on a cost-benefit basis some of the extreme measures contemplated in the proposal, the analysis must differentiate between the systemic disturbance from a disorderly run that creates forced selling of assets prior to maturity, and the systemic effects of a slower and orderly walking of assets from the natural maturity of short-term instruments. Less costly measures, such as gates that can slow down redemptions, eliminate disorderly runs without the serious consequences to the economy of floating the NAV or costly capital requirements.

The recent concerns over money market fund holdings of European bank commercial paper, and the orderly response to it, show that such orderly walks do occur and do not set off systemic crises.

Clearly, even an orderly move of billions of dollars of assets will have an impact on the financial system. In the next financial crisis there will be the usual flight to quality, even if money market funds do not exist. This is inevitable, and regulators need to be prepared for it. The banks that rely upon commercial paper and repo will turn to the Fed. Other commercial paper issuers will turn to their backup lines of credit at the banks. As such borrowers are generally of very high credit quality, this will actually increase the average credit quality of the bank loan portfolios.

The increase in bank assets, however, may put some strain on bank capital ratios, constraining other lending activities to creditworthy borrowers. This strain can be handled when the time comes in a number of the usual ways. Bank loans made under backup credit lines to commercial paper issuers can be given favorable regulatory treatment in the calculation of bank capital ratios. Similarly, the Basel III approach of reducing bank capital requirements (or more precisely, not requiring the extra capital buffers that are to be built up in good times) can also be applied in a crisis if bank capital ratios constrain appropriate bank lending.

**Gates transform disorderly runs into orderly walks that eliminate systemic risk.**

Runs in money market funds, and the systemic risk that they pose, can easily be prevented at much lower cost to the economy than the proposals in the release. In particular, gates that limit MMMF redemptions to the natural maturity of the MMMF portfolios can prevent the forced selling of assets and transform a disorderly run into an orderly walk to quality.

Normally, money market funds are required to honor redemption requests without delay, even if this requires the selling of instruments in the funds’ portfolios. A gate would permit a fund to limit its cash disbursements to the cash received from the normal maturity of its investments. Here is how such a gate might work in practice:

A money market fund has $100 million in net assets, prudently invested in a properly diversified mix of commercial paper, bank certificates of deposit, and repurchase agreements. Customers have been well
informed in the fund’s disclosures and marketing materials that “In the event that redemption requests exceed the normal cash flows from maturing assets held by the fund, such redemption requests may be delayed until the cash flows from maturing assets permit such redemptions to be made in an orderly manner without harming other shareholders.”

Financial jitters affect the market, and the fund receives redemption requests for $20 million, which is in excess of the $10 million that will come in naturally because of the fund’s 10% daily liquidity. The fund’s management (NOT the board of directors), activates the gate and pays out only $10 million on the first day. The fund chooses to pay in full all small retail redemption requests, including all of those made with share drafts in order to avoid bounced check charges for customers. However, the large redemption requests are given a partial payment on the first day. The fund also notifies the SEC, notifies its board of directors, issues a press release, and posts a notice on its web site.

Entering the second day, the fund has $90 million under management and a daily liquidity of $9 million. The fund receives $1 million in additional net redemption requests in addition to the $10 million left over from the day before. It thus pays out the $9 million in cash that comes in on that day to the accounts that redeemed on the first day, while the accounts that redeem on the second day have to wait. Entering the third day, the fund has $81 million under management and $8.1 million of daily liquidity from maturing instruments. The fund receives no new net redemption requests, but uses the cash received on that day to pay the $1 million remaining to the accounts that redeemed on the first day and also the $1 million due to the accounts that redeemed on the second day. As all redemption requests have been fulfilled, the fund lifts the gates and resumes normal operations. Again, the fund notifies the SEC, notifies its board of directors, issues a press release, and posts a notice on its web site.

Thus, we see that there is no forced selling of financial instruments. The gate has transformed a run on the fund into an orderly walk.

One could argue that the possibility that a gate might be activated might induce investors to rush to withdraw assets before the gate is imposed. Perhaps. But even then, as long as the fund is not forced to sell assets, there is no systemically disruptive event.

**Funds should have right to pay excess redemptions in kind with securities valued at amortized cost.**

A similar alternative to prevent runs is to give funds the power to pay excessive redemptions with portfolio securities instead of cash without liquidating the fund. The securities would be valued at amortized cost. Thus, if a large shareholder attempts to make an excessive redemption on short notice, the fund could just hand them any of its portfolio securities. As the rules would permit the fund to use any of its securities valued at amortized cost, it could offload the junkiest stuff in its portfolio onto the

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5 This needs to be a management decision and not a board decision as there will not be sufficient time to notify the board and hold a board meeting. The board should, of course, be closely monitoring the situation.
running shareholder. In a time of financial jitters, any large shareholder thinking of running would know that they faced the likelihood of getting stuck with unattractive paper, and thus be unlikely to run.

**Discretionary sponsor support has been quite effective. Making the support explicit is costly.**

Sponsors have a strong commercial incentive to stand behind their funds. Breaking the buck means the immediate and catastrophic end of the sponsor’s entire asset management business. The franchise risk is huge. As the sponsors of The Reserve Fund have learned, breaking the buck effectively puts the entire firm out of business and results in years of expensive criminal and civil litigation. Thus, sponsors are willing to put up the entire value of their business in order to save it from the franchise ending catastrophe of breaking the buck.

The proposing release cites numerous cases in which MMMF sponsors have stepped in to support their funds. In many if not most of these situations, the funds purchased paper whose value had temporarily declined in value, but that eventually matured and was paid in full. Thus, it is not expensive for sponsors to support their funds in all cases except those in which there is an actual default on one of the fund’s holdings, as opposed to temporary market jitters about the credit quality of paper that later pays in full.

Sponsors are, in effect, writing CDS insurance on the holdings of their MMMF portfolios. Given the extremely high quality of MMMF holdings, the average cost of the de facto CDS is quite small.

Making the support explicit, however, entails real but unnecessary costs to the sponsors that will be passed on to investors. Explicit contractual guarantees by sponsors would not be any more effective than the existing de facto guarantees. Fund sponsors already have their entire businesses on the line, so making that guarantee explicit would not create any additional protection for investors. Accounting and regulatory requirements for such guarantees would drive up the cost of doing business with no additional benefit to consumers.

Capital requirements such as buffer shares are also quite costly. Hanson, Scharfstein, and Sunderam assert that the losses to be born by the buffer are such a low risk that investors would accept a BBB equivalent yield on the buffer shares of 120 basis points over short-term rates, leading to a total cost to the ordinary shareholders of approximately 5 basis points. However, in today’s low yield environment, even five basis points would push most money market funds into negative yield territory.

Yet it is not clear that there is sufficient market demand for such buffer shares. Marketing expenses and management costs for such a novel financial product would clearly add to the cost above and beyond the Hanson et al. estimates. It could be quite costly to develop and market what is a fairly small product. The size of the buffer shares would be driven by the size of the ordinary shares, and the fund may have to expend significant marketing resources to place just the right number of buffer shares. This would be the case even if – and especially if -- the buffer is fairly small. For example, the 3% buffer size for a $1

6 http://www.regulations.gov/#!documentDetail;D=FSOC-2012-0003-0032
billion MMMF would be $30 million, which is quite small in the realm of financial products. The overhead associated with maintaining and marketing such a small fund would clearly add substantially to the 5 basis points that Hanson et al. would be needed just for the credit risk.

If a market cannot be found for such buffer shares, the fund sponsor may have to use expensive equity to fund the buffer. Using the historical equity risk premium of about 10% implies that a 3% buffer would add approximately 30 basis points to the annual cost of running a fund. Such large increases in the cost of running a fund would likely drive many smaller funds out of business, reducing choice for consumers and increasing concentration in the industry. Again, these impacts on the industry and downstream effects on the economy would have to be carefully estimated in a cost-benefit analysis.

**Disclosure of sponsor’s financial condition (similar to SEC Rule 17a-5) will alert investors to avoid sponsors too small to support their funds.**

This discretionary support only failed in the case of The Reserve Fund because it had rapidly grown larger than the sponsor was able to support. If funds do not grow larger than the ability of their sponsor to support them, then the very strong incentives for sponsoring firms to support their funds are sufficient for consumer protection and systemic risk prevention.

One simple and low-cost reform is for the SEC to require fund sponsors to disseminate financial statements, similar to Rule 17a-5 which requires brokerage firms to disseminate financial information to customers about the health of the brokerage firm. These financial statements should include the income statement, balance sheet, and cash flow statement of the sponsor. In this way, fund investors would be able to determine for themselves whether the sponsor was big enough and healthy enough to support the funds. Such disclosure would be very inexpensive, as the sponsors already gather this information.

Large institutional investors of the type that would run from a money market fund are quite sophisticated. They would use this information about the financial size and health of the fund sponsor in their decisions about which funds to use. They would likely shy away from funds whose sponsors are not large enough to backstop their funds. This will help to prevent runs by preventing MMMFs from outgrowing the ability of their sponsors to support them.

Likewise, sponsors whose size may make it difficult for them to support their funds should be required to make this clear in their prospectus and marketing materials. If the equity of the sponsor is less than one percent of the assets of the money market fund, then there should be a clear warning. Such warnings should not be buried in the standard boilerplate that is ignored by most investors, but in a clear black box warning such as the following:

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7 SEC Rule 17a-5 only requires balance sheet information to be released. As I have mentioned in a comment letter, a balance sheet alone is inadequate. [http://www.sec.gov/comments/s7-23-11/s72311-17.pdf](http://www.sec.gov/comments/s7-23-11/s72311-17.pdf).
The proposed reforms threaten to do more systemic harm than good.

The proposed reforms would seriously reduce the attractiveness of MMMFs. The elimination of the fixed $1.00 NAV leads to uncertainty in transaction prices, making it less attractive to investors. As a retail investor in money market funds for over 30 years, I cringe at the idea that each withdrawal could yield a taxable gain or loss, an accounting nightmare. The various holdback proposals, although not targeted at retail investors, will likewise reduce the utility of MMMFs to institutional investors as well.

Likewise, the proposed capital buffers will substantially increase the cost of running money market funds, a cost that will be passed on directly to the consumer. One of the reasons I prefer money market funds as an investor is that they pass through most of the interest available in the money markets. Banks, unfortunately, do not, even in the accounts they misleadingly label as “money market” accounts.

A competent cost-benefit analysis would have to estimate the shrinkage of the industry from these effects and look at the cost to the economy. A shrinkage of the MMMF sector will push more assets into too-big-to-fail banks, thus increasing the real systemic risk posed by those institutions. Again, a proper assessment of the costs and benefits must take into account the increased systemic risk stemming from increasing the size of large banks.

Consumer protection will decrease as a result of a shrinkage of the MMMF sector. Some consumers will chase yield and invest in short-term bond funds, many of which take on substantially higher risk, as many consumers have learned the hard way.

A shrinkage of prime MMMFs will reduce demand for commercial paper, forcing borrowers to use higher cost bank loans. This increase in the cost of capital to issuing corporations will naturally lead to less investment and fewer jobs. A thorough cost-benefit analysis must take these into consideration as well.
**Amortized cost accounting for MMMFs reduces systemic risk.**

The debate over whether MMMFs should have fixed or variable NAVs is really one over the use of amortized cost accounting. If funds are permitted to continue using amortized cost accounting, then it is almost trivial for them to maintain a constant $1.0000 NAV. Thus, even if they are forced to “float” the NAV, amortized cost accounting permits them to maintain a constant NAV.

Some would argue that funds should be required to use market quotations to value their holdings, on the premise that market quotations are a better estimate of the “true” value of the holdings. This is an extrapolation of the “efficient market hypothesis” to the false meme that “market quotes are always perfect.” Yes, there is a body of academic literature that shows that equity fund managers investing in highly liquid exchange-traded common stocks rarely beat their passive benchmarks, which is the usual justification for the efficient markets hypothesis. But this literature does not show that short-term market quotes are always correct estimates of value. The bizarre behavior of equity prices during the “Flash Crash” of May 6, 2010 is strong evidence that market prices sometimes deviate substantially from economic fundamentals, especially in panic situations.

Although the efficient markets hypothesis sounds plausible in an introductory finance class, in recent years academics have become more appreciative of the limits to arbitrage that can result in prices deviating from fundamentals due to market frictions.\(^8\)

Fixed income instruments such as commercial paper are traded in opaque over-the-counter markets, not transparent public exchanges. Consequently, there is a dearth of literature on the accuracy of fixed income markets, especially in panic situations.

Under normal market conditions, amortized cost accounting for MMMFs results in prices indistinguishable from market-based accounting because of the very short maturity of the instruments. However, in a panic, prices may deviate substantially from economic fundamentals. The normal intermediaries who are normally willing to buy paper may be temporarily or permanently out of the market and unable to provide realistic bids for high quality financial instruments. There may be no quotes at all for certain instruments, or the only quotes might be predatory quotes from traders attempting to profit from a crisis.

Forcing funds to use panic-based quotes to value their holdings is a recipe for increasing systemic risk. Indeed, the prospect of looming mark-to-market paper losses on money market fund holdings – even when their holdings are sound -- may well motivate investors to run from the sector.

Adopting mark-to-panicked-market accounting even with floating NAVs will not prevent runs. Traders facing uncertainty in the market may be reluctant to recognize various market quotes and hesitate in

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\(^8\) For example, see Schleifer, Andrei, and Vishny, Robert W., 1997, The Limits of Arbitrage, *Journal of Finance* 52, 35-55.
marking down various assets. This was one of the hallmarks of the recent financial crisis. It is also human nature. In the fog of uncertainty of the next financial crisis, skeptics will rationally doubt the accuracy of any marks to market and begin the inevitable flight to quality.

Once again, gates that slow down redemptions to the normal cash flows coming into the fund eliminate the systemic risk of a run. Good paper will pay off at par with no loss to investors. If funds are not forced to sell good assets prior to maturity, then there are no losses to the fund and no downstream impact from distressed selling of assets.

Thus, amortized cost accounting is appropriate for money market funds. The use of inaccurate market prices in a panic is destabilizing to the economy.

**IRS should relax regulations to permit fund earnings and sponsor contributions to replenish MMMF NAVs.**

The SEC staff has pointed out that IRS regulations do not permit funds to use portfolio earnings to rebuild its NAV if it falls below $1.00. This makes no sense. If the NAV drops below $1.00, the fund should be allowed to use earnings on fund investments to bring the NAV back up to $1.00. Likewise, the fund should be permitted to use fee waivers to also replenish the NAV of the fund.

For example, suppose that a fund holds some paper that becomes distressed, and it sells the paper at a loss, reducing the NAV to $0.9975. It has not broken the buck as the NAV still rounds to $1.00, and it continues to transact at $1.00. The fund should be permitted to waive its management fee and allow the waived fees to accrue to the NAV to replenish the fund.

The FSOC should request that the IRS examine its rules to permit such common sense actions without adverse tax consequences.

**Any capital buffers should be risk-based.**

Although I see no need for explicit capital buffers for money market funds, if any buffers are imposed they should be risk-based. Any required buffer should be based on the risk of the underlying portfolio. Clearly, there should be no buffer requirement for holdings of T-bills or for the daily liquidity. Likewise, any holding that is less than 0.5% of the total portfolio cannot break the buck, and thus should have no

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buffer requirement. Likewise, there should be no buffer requirements for instruments that are insured with credible third party guarantees or instruments that are protected with credit default swaps.

**Other enhancements should be permitted on a voluntary basis.**

Several proposals have been put forth with the intent of increasing the stability of the money market fund sector. While it would be risky and unwise to force many of these untested ideas onto the entire fund sector, funds should be given the regulatory flexibility and encouragement to experiment with many of these proposals. For example, Professor Larry Harris has put forth an interesting proposal that would reduce incentives for investors to run by having any differences between actual NAV and the $1.00 reflected in the monthly dividend payments that are paid after redemptions. Share purchases and redemptions would be booked at $1.00 per share, and any differences between the $1.00 and the true NAV (e.g. $1.0001) would be added to or subtracted from the interest that is paid at the end of the month. Funds should be given the ability to do this.

Similarly, the SEC should fast-track any fund proposals to offer senior/subordinated (buffer) share structures that would result in enhanced safety for the senior shares. This would provide experience on the cost and market acceptance of such structures.

Funds that experiment with credit enhancements (whether the enhancement is from subordinated buffer shares, CDS, or other credit enhancements) should be permitted to differentiate themselves by marketing the enhanced safety of the funds. The SEC should permit such funds to use a term that indicates the enhanced nature of the safety of the funds. For example, such funds could be labeled as “senior” or “credit enhanced” money market funds.

If you have any questions, feel free to email or call me.

Respectfully submitted,

James J. Angel, Ph.D., CFA

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While theoretically two unrelated holdings of just less than 0.5% could both default in a short period of time and result in a breaking of the buck, this has never occurred in the history of the industry. The probability of this occurring is infinitesimal.