The Honorable Randal K. Quarles
Chair of the Financial Stability Board
Governor and Vice Chair for Supervision
U.S. Federal Reserve
20th St. and Constitution Ave., NW
Washington, DC 20551

August 13, 2021

Re: Money Market Fund Policy Proposals

Dear Chairman Quarles,

We welcome the opportunity to comment on the Financial Stability Board (FSB) request for comment on its consultative document "Policy Proposals to Enhance Money Market Fund Resilience" ("the FSB Report") which outlines policy proposals to enhance money market fund (MMF) resilience. Fermat Capital Management, LLC manages multiple investment strategies, including in trade finance where the underlying risk is often referred to as "working capital". We manage money on behalf of regulated investors including U.S. insurance companies, pension plans and banks, as well as sovereign wealth funds, family offices and private wealth. As an investment manager, we are not involved in the origination of the transactions we invest in, rather we purchase investments from entities such as banks and financial technology broker-dealers.

We recently commented on the President's Working Group's December 2020 report on MMF resilience ("the PWG Report") and attach those comments—which were filed with and published by the Securities and Exchange Commission[1] for the record—to this letter. While we covered a number of topics in that response, here we address a subset that are also relevant to the FSB Report.

In our view, the FSB Report, like the PWG Report, passively explores numerous financial market issues in terms of their interconnectedness and actor motivations but doesn't sufficiently consider the *drivers* of these critical inter-relationships and cross-market investor behavior correlations. These drivers stem from fundamental structural vulnerabilities within MMFs themselves: that is the unrestricted involvement of certain actor groups within these products. We believe that a comprehensive analysis of the 2020 market dislocation, an analysis missing from the FSB Report, would elucidate these structural vulnerabilities and is a pre-requisite for making robust and effective policy recommendations on MMF reform, as outlined below. We recommend this

[1] https://www.sec.gov/comments/s7-01-21/s70121-8437078-229662.pdf

additional analysis should be commissioned and performed by public agencies as input into FSB work in advance of proposing more comprehensive MMF reforms for public comment.

MMFs, both Federal government MMFs and non-government MMFs, serve two important but conflicting objectives. First, they provide maturity transformation of asset financing for longer term assets through daily liquidity investing on behalf of savers. The principal vulnerability of this function is an asset liability duration mismatch for the required liquidity, whereby an investor's (saver's) withdrawal of cash (liabilities) impacts both available cash (assets) and marketable securities (assets), as well the market pricing of hold-to-maturity asset securities (assets).

Second, while MMFs predominately source and acquire assets from banks to achieve the first objective, MMFs—both Federal government and non-government—are also important providers of short-term financing for banks. In Federal government funds, this financing is in the form of repo financing, known as bank asset financing ("BAF"), while in non-government funds, in addition to BAF, it also includes liability financing of banks, largely through commercial paper, asset-backed commercial paper, deposits, and certificates of deposit, known as bank liability financing ("BLF"). A significant percentage of banks are also dealers of Federal government and of non-government MMFs to savers ("MMF2S"). Further, some bank holding companies ("BHC") also have asset management subsidiaries that are large investment managers of MMFs ("IMMMF"). Finally, a significant share of BAF and BLF involves cross border banks in Federal government and non-government MMFs, adding further complexity ("XBBF").

As noted above, asset liability mismatches are a common challenge for all debtors including consumers, businesses, funds of all types as well as banks. Banks are also the principal service providers to these clients, i.e., consumers, businesses, funds, and banks, to address this mismatch by providing either secured or unsecured financing to those entities, adding to the inter-dependent landscape. To be able to perform these services banks are able to draw on demand resources from central banks like the Federal Reserve and, in part, are specifically regulated for being able to draw on central bank resources in an attempt to ensure their safety and soundness in providing this critical on demand provision of asset liability mismatch financing.

The role of banks as agents, as dealers, as borrowers, as lenders and as investment management distributors creates unique challenges in addressing asset liability mismatch risk for most funds but in particular for MMFs, not least in light of banks having asymmetric information over other market participants, i.e., the banks' debtors, the banks' creditors, the banks' debtor counterparties (other banks and dealers including cross boarder institutions), the banks' investment management clients, the banks' saver clients as well as both Federal government supervisors and securities regulators.

In "non-market shock" conditions, banks individually adjust their asset financing (BAF), their borrowing (BLF), their cross-border asset and borrowing financing (XBBF), their distribution with investment managers (IMMMF), and their saver clients (MMF2S) to optimize the individual profit and loss of each activity. In a "market shock" situation, however, the individual component optimization changes in favor of capital preservation, with BAF, BLF and XBBF prioritized by the banks over IMMMF and MMF2S to the disadvantage of investors. In addition, market shocks impact other parts of bank portfolios that exacerbate BAF, BLF and XBBF needs and lead to prioritization of other activities by other actors, such as an increase in revolving credit drawings by corporates for example, which in 2020 was a significant and sustained source of MMF stress and consumed significant capital funding resources for banks.

Further, banks and MMFs hold a high proportion of non-market traded assets that rely on model-based valuations. In market shocks, when demand for financing and need for cash are high, model-based valuations create significant constraints, as valuation differences among banks and funds inhibit ease of financing and capital flows precisely when they may be most needed.[2]

These multi-faceted and often conflicted roles of banks within MMFs were not adequately addressed in the FSB Report. The FSB Report provides analytical data and commentary in several figures, tables, and discussion points with regards to events in 2020, but these do not reflect the complexity and inter-connectedness outlined above. For example, there is no analysis of key MMF financing sources nor on the timing of transactions as MMF assets are acquired or disposed, whereas there is research on this topic by other government sources.[3] There is no analysis on intraday trading timing impacts nor of other credit market stress exacerbating MMFs, such as revolving credit drawings.[4] There is no analysis of cross-border funding stress contagion impacting MMFs.[5] Nor is the nature of related accounting stress considered in the Report.[6] Such a richer analysis would provide insights into the actions and timings of banks by type, as well the actions of different classes of investors and other actors within the system, and would certainly highlight additional proposals to mitigate future episodes of MMF stress.

Finally, while we have predominantly focused on the role of banks above, additional research on and analysis of the behavior of savers is also necessary. Asymmetric information exists among savers as well as banks—both in and among institutional investors as well as among retail investors. MMF products lack a penalty for exiting quickly, an action that exacerbates the market shock dynamics noted above as those who swiftly liquidate investments in turn exploit less knowledgeable and slower MMF2S, both institutional and retail, potentially leaving them with

[2] https://www.bis.org/bcbs/publ/wp28.pdf
[3] https://libertystreeteconomics.newyorkfed.org/2021/07/intraday-timing-of-general-collateral-repo-markets/
[4] https://www.sec.gov/files/US-Credit-Markets_COVID-19_Report.pdf
[5] https://www.bis.org/publ/bisbull34.htm
[6] https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2499~fa7709a9ec.en.pdf

higher costs, losses, and illiquidity. Given this is to be expected, it raises the question as to why more sophisticated investors and retail investors, for example, are allowed to simultaneously invest in many MMF products without segmentation or restriction and with no consideration for their likely behaviors.

Without first understanding the details of the actions of banks and investors across a finer segmentation of these groups, and how these behaviors manifested themselves in 2020, providing a summary of potential options (i.e., Table 3: "Representative policy options and their variants/extensions by mechanism to enhance resilience") is premature. In particular, proposals that do not include substantive changes to the role of banks in, and the financing of banks by, MMF products will not, in our view, enhance MMF resilience nor prevent future MMF dislocation events. The recommended analysis would provide insights that could assist the FSB in proposing targeted and efficient restrictions on both banks and investors in these products, to strengthen MMF resilience for the long-term.

We are available for any required clarifications or any questions that you may have on the recommendations outlined above.

Yours sincerely,

Adam L. Dener
Managing Director
Fermat Capital Management, LLC
adam.dener@fcm.com
(203) 454 6815

Attachment: President's Working Group on Money Market Funds Letter - March 2021

Ms. Sarah G. ten Siethoff
Acting Division Director and the Associate Director for the Rulemaking Office
The Securities and Exchange Commission
100 F Street, NE
Washington, DC 20549

March 2, 2021

Re: File Number S7-01-21

Dear Acting Director ten Siethoff,

We welcome the opportunity to respond to the December 2020 request for comment on the "President's Working Group Report on Money Market Funds" ("the Report"). Fermat Capital Management, LLC manages multiple investment strategies, including in trade finance, where the underlying risk is often referred to as "working capital", and insurance-linked securities, where the underlying risk is often referred to as "catastrophe risk". We manage money on behalf of regulated investors including insurance companies, pension plans and banks, as well as sovereign wealth funds, family offices and private wealth.

While the Report discusses various reform measures that policymakers could consider for improving the resilience of prime and tax-exempt money market funds ("PMMFs") and broader short-term funding markets, the data analysis and the potential policy responses presented in the Report are incomplete. This letter outlines additional data analysis and policy measures that the President's Working Group ("PWG") should consider in order to inform a comprehensive and effective set of policy recommendations. We have organized our letter into two main sections. The first section focuses on additional data analysis that the PWG should undertake to reexamine the 2020 market events. We believe this will clearly highlight basic systemic structural issues within PMMFs and short-term funding markets that led to the crisis. The second section focuses on additional policy responses that could be then considered as a result of the supplemental analysis discussed in the first section.

1) Additional Data Analysis

The Report passively explores numerous financial markets in terms of their interconnectedness and the motivations of various market actors but doesn't sufficiently address the drivers of these critical inter-relationships and cross-market investor behavior correlations that stem from fundamental

structural vulnerabilities within PMMFs. This section of our letter highlights four key areas that were not examined in the Report and that require more research and consideration. A comprehensive analysis of the 2020 market dislocation is essential to making robust and effective policy recommendations. This additional analysis should be performed and documented by public agencies as input into PWG work in advance of proposing further PMMF reform options.

a) Fund Investments

Composition of fund investments segmented by debtor type and by debtor nationality

Detailed information on the composition of PMMF investments is important because the debtors being financed by PMMF investments are also subject to the same run risk as the PMMFs themselves. A principle of PMMFs is that the underlying investments that they are authorized to hold include short-term bank financing investments. The systemic risk posed by banks losing access to private funding markets—including access to both overnight and time deposits, securities repurchase financing, commercial paper financing, and other asset-based borrowing—is therefore inter-related to money market funds. As noted in the SEC data, which distinguishes PMMF investments as either financial company ("bank") commercial paper ("CP") or non-financial company CP only, slightly less than half of all PMMF holdings were bank debt instruments just prior to the March 2020 market dislocation.[1] We note that these obligations, as well as asset-backed CP, typically also rely on financial company credit support. Using a broader definition of bank debt investments held by PMMFs, e.g., by including short-term investments that may be indirectly receiving bank credit support, suggests that closer to 70% of all investments were bank financing assets. Following the events of March 2020, there was a significant reduction in the bank financing asset composition of PMMFs along with a sizable increase in Treasury-related product composition.[2] Given this inherent interconnection and reliance between PMMFs and bank financing, a more granular analysis of short-term investments is fundamental to understanding which PMMF investments in particular contributed the most to the contagion.

Financing banks, however, is far from the only systemic issue for PMMFs. A significant portion of financing is to cross-border banks, in addition to US banks, which suggests scope for market stress contagion not only within the US, but to the US from overseas and vice versa. The Federal Reserve interventions in 2020 were global, by providing liquidity not only directly to market participants in

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[1] Source: Tables 9-11, "Division of Investment Management Analytics Office Money Market Fund Statistics Form N-MFP Data, period ending February 2020; Filings Received through March 13, 2020", Securities Exchange Commission, March 2020. Available online at: https://www.sec.gov/files/mmf-statistics-2020-02.pdf

[2] Source: Tables 9-11, "Division of Investment Management Analytics Office Money Market Fund Statistics Form N-MFP Data, period ending November 2020; Filings Received through December 8, 2020", Securities Exchange Commission, December 2020. Available online at: https://www.sec.gov/files/mmf-statistics-2020-11.pdf

the US but also through central bank swap facilities to overseas central banks. Therefore, the nationality of banks financed by PMMFs is also a potential source of systemic risk.[3] The scope for market correlations from both within and outside the US was not studied by the PWG.

In short, given the significant systemic risk they can pose to money market funds, PMMF asset composition, asset nationality, and financing correlations *across* PMMF investment segments, are critical factors that the Report's analysis did not cover and necessitate a more detailed PWG study. The results will shed light on which particular investments and which debtor nationalities contributed the most to the 2020 market stress.

b) Related Markets

Examination of investment grade revolving credit drawings and impact on balance sheet capacity for bank intermediation

As the 2020 crisis began, raising cash by liquidation of assets from PMMFs and drawing on revolvers resulted in increasing deposits (liabilities) and commercial and industrial loans (assets) on bank balance sheets. Residual value (essentially book equity of commercial banks) volatility increased as a result, limiting balance sheet capacity and the ability of banks to provide funding and liquidity.[4]

Considerable variation exists in the estimation in the value of bank book equity, which is a key input into regulatory capital calculations, bank balance sheet capacity and thus intermediation availability. Importantly, such variations impact the ability of banks to intermediate in the capital markets during times of market stress.[5] Bank commitments are large, estimated at approximately US$5 trillion in notional prospective exposure across over 9,000 lending facilities.[6] As noted above, adding to that stress in 2020 were increases in commercial and industrial loans as debtors raised cash through drawings on revolving credit and other borrowing facilities.[7] In addition, increases in deposits—as companies raised cash and deposited it into banks—increased volatility in bank book equity. ECB research suggests a 5% change in mark-to-market trading value book leads to a 1.3%

[3] Source: Graph 3, "Central bank swap lines and cross-border bank flows", BIS Bulletin No. 34, Bank for International Settlements, December 2020. Available online at: https://www.bis.org/publ/bisbull34.htm

[4] Author's calculations using H8 Federal Reserve Data available for download at: https://www.federalreserve.gov/datadownload/Choose.aspx?rel=H8

[5] Ibid.

[6] Source: "Shared National Credit Program, 1st and 3rd Quarter 2020 Reviews", Federal Reserve, February 2021. Available online at: https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20210225a1.pdf

[7] Author's calculations using H8 Federal Reserve Data available for download at: https://www.federalreserve.gov/datadownload/Choose.aspx?rel=H8

reduction in bank equity on average.[8] Further analysis, however is, required to understand the impact of these actions on bank book equity in 2020 and therefore their impact on broader market function and liquidity.

Banks being financed by PMMFs, and banks investing in PMMFs through their asset accounts, creates significant stress on the system that reduces bank ability to make markets in securities at a time when such market-making is needed most. The stress on banks, limiting their ability to intermediate in other markets—exacerbated by stress on PMMFs—is an area requiring significant additional examination and consideration by the PWG.

c) Fund Accounting

Examination of investment grade fixed income asset valuations in PMMFs

A challenge with fixed income assets is that they do not trade often and are not, by and large, traded on exchanges, which means establishing their value is not as straightforward as in other asset classes such as public equities. Compounding this problem of the lack of observable, real-time market price data, is the ability afforded to investment management to provide input on what bonds are worth through marking bonds based upon judgement (known as "mark-to-model" valuations). Despite these challenges, PMMFs are required to mark their assets to market every day. PMMFs and other investment funds with daily liquidity features cannot function without daily valuation. Every time an investor purchases or sells shares in a fund—activities that open-end mutual funds like PMMFs are required to facilitate every day—the transaction must be based on the value of the whole portfolio in which those shares represent ownership.

It is also worth observing that bank loan portfolios have similar issues with valuation but with a key distinction: only a *small* percentage of bank loans may trade in a single day, which means bank loan portfolio valuations are also subject to significant judgement. This, in turn, creates uncertainty when lending to banks in times of market stress. ECB data suggests that in general ~25% of bank holdings are in assets that mark-to-market, with the remaining assets tied up in loans that are not readily tradeable.[9]

The lack of real-time observable pricing data creates significant reliance in accounting judgement, which in turn has a significant impact on asset accounting and asset valuation, particularly during times of stress. As such, accounting and valuation policy of PMMFs requires attention from the PWG.

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[8] Source: Figure 2, "Working Paper Series Contagion Accounting", No. 2499, European Central Bank, December 2020. Available online at: https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2499~fa7709a9ec.en.pdf

[9] Source: Tables 4 and 6, "Working Paper Series Contagion Accounting", No. 2499, European Central Bank, December 2020. Available online at: https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2499~fa7709a9ec.en.pdf

The PWG should reexamine market function in 2020 using more granular data. This should include not just *daily* pricing spread dispersion of all eligible fixed income assets that were invested in PMMFs at the time, but the spread dispersion of their values across all public funds. The PWG must also examine hourly subscription and redemption data for PMMFs and how these flows related to movements in pricing spreads. Such an approach will provide a more detailed picture of the 2020 crisis and the solvency pressure that existed on assets in the market at the time and will provide important insights on the performance of mark-to-market valuation for PMMF fixed income investments and therefore PMMFs during times of stress.

In the past there has also been considerable examination of the role of ratings and ratings agencies in the context of policy changes for PMMFs and other money market funds, however little has been done to change the role of ratings in PMMFs or other parts of the fixed income markets. The March 2020 market interventions by the Federal Reserve, and the PWG examination, also provide a rationale to revisit the topic of ratings and ratings agencies in PMMF valuation.

d) Investors and Behavior

Examination of market interventions, investor behavior and redemptions from other bond mutual funds

We have not seen any detailed data or in-depth analysis on the timing, amounts and sources of redemptions from PMMFs during the March 2020 crisis. This is a critical aspect of PMMF activity and resilience and requires detailed examination by the PWG. Segmentation of redemption activity limited to retail and institutional investors only, with data availability obscured by beneficial ownership holdings in "street" entities, is too crude an approach to fully appreciate the dynamics of 2020 and which specific subset of actors, and actions, exacerbated the stress on PMMFs. A more thorough investigation by the PWG is required.

With regards to the actions of PMMF investors, Federal Reserve research documents the 2020 phenomenon as being significantly biased towards institutional investor behavior.[10] Institutional investors are expected to run more than retail investors, for example, and have done so historically:

> *"The larger outflows from institutional funds are consistent with past episodes of industry dislocation (see Cipriani and La Spada, 2017) and can be attributed to the higher sophistication of institutional investors relative to retail ones.*

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[10] Source: Figure 3 and 4, "Staff Reports: Sophisticated and Unsophisticated Runs", No. 956, Federal Reserve Bank of New York, December 2020. Available online at: https://www.newyorkfed.org/research/staff_reports/sr956

It is also interesting to notice that larger institutional outflows occurred notwithstanding the fact that institutional prime funds (but not retail ones) were forced to adopt a floating NAV (whose main objective was to make runs less likely)."[11]

Such detail is instructive but overly simple. While institutional investors may be a predominate source of stress, as recently noted by the Bank for International Settlements, some may contribute more than others and, further, institutional investors are not the only source of market stress.[12] Many actors—including brokers and PMMF investment managers (sponsors)—with varied incentives, often fundamentally misaligned with PMMF risks, contribute to the overall financial market dynamic which exacerbate structural vulnerabilities of PMMFs and result in unintended consequences in terms of their ability to function.

In prior work on the PMMF topic, issues regarding "moral hazard" and "insurance hazard" with respect to the role of investment managers and the Federal Reserve in particular were discussed at length, with interventions designed in an attempt to address directly the questions of motivations and incentives. While noted, these fundamental underlying and long-standing issues were not tackled in the Report, nor its recommendations, with the depth and exigency required. A detailed examination of the Federal Reserve's 2020 market intervention—its effectiveness, including for domestic and foreign banks, and the incentives and unintended consequences it created for all stakeholders involved, including managers—is required by the PWG. In addition, an analysis on PMMF redemption sizes and timing during the crisis, using a more granular segmentation of investor classes than just institutional and retail, and more detailed information on end investors (as opposed to the anonymity of "street name" holdings), will enable the PWG to understand better which actors are most likely to cause market stress, how and why. Finally, the issue of market actor incentives and unintended consequences is not just limited to PMMFs, but also impacts bond mutual funds. An examination of investor behavior and financing within bond mutual funds may also yield insights for the PWG.

2) Additional Policy Measures

As discussed in the previous section, additional research is required to appropriately assess the structural vulnerabilities and systemic issues facing PMMFs before effective and durable policy responses can be proposed. Given the substantial gaps in analysis to date, it is premature to provide

[11] Source: "Staff Reports: Sophisticated and Unsophisticated Runs", No. 956, Federal Reserve Bank of New York, December 2020. Available online at: https://www.newyorkfed.org/research/staff_reports/sr956

[12] Source: "Investor size, liquidity and prime money market fund stress", BIS Quarterly Review, Bank for International Settlement, March 2021. Available online at: https://www.bis.org/publ/qtrpdf/r_qt2103.htm

comments on the potential reform options to increase the resilience of PMMFs that are presented in the Report.

Nevertheless, it is difficult to contemplate how to reduce the systemic risk of fund structures like PMMFs without limiting their ability to finance banks or without requiring them to maintain such high levels of Treasury or other cash holdings that these vehicles would need to have repo access to the Federal Reserve. We believe, however, that such measures should be considered as long as their impact on PMMF economic viability, and on related markets, is noted. With regard to other possible policy recommendations, we suggest that—with the additional research identified above—consideration for PMMF regulation should be broadened to include:

1. Restrictions on types of short-term investments that funds make, including:
    a. Amounts of bank and or bank-related financing by the funds
    b. Duration of bank or bank-related financing by the funds
    c. Nationality of banks that the funds can invest in restricted absent suitable national central bank collateral governed through the Federal Reserve
2. Restrictions on asset type and fund accounting policies, eliminating judgement-based mark to market valuations, including:
    a. Developing a centralized accounting reporting repository for PMMF investible assets
    b. Stipulating the use of a centralized accounting repository for asset valuations and "normalized" accounting across all PMMFs
3. PMMF manager and brokerage fee deferrals to a period such as quarterly in arrears, with fees at risk to fund capital deficits. Such a fee payment system would help to align incentives with PMMF risk and relieve pressure on the system in times of market stress. This is a specific, workable example of a "capital buffer" outlined in the Report.

In addition, we have the following overarching policy recommendations that we believe should be considered by the PWG:

4. Supervision of PMMFs by the Federal Reserve. Given PMMFs are clearly a dominant source of finance for banks, and as the Federal Reserve supervises banks, Federal Reserve supervision of PMMFs is an option that should be discussed.
5. New private market solutions, such as standby and contingent funding facilities provided by private non-bank investors in event of documented qualifying events ("runs") to support PMMFs. Innovation with respect to broadening the investor and capital base outside of the banking sector by using private non-bank capital could have an important role in minimizing systemic risk within PMMFs and across markets. The financial technology already exists in other sectors and could be borrowed and adapted to design such non-bank capital instruments, without the unnecessary complexity of proposals such as a "Liquidity Exchange Bank".

FERMAT CAPITAL
MANAGEMENT, LLC

In summary, this letter outlines key areas for additional analysis and suggests supplemental policy measures that the PWG should consider in order to develop a suitable suite of policy responses to improve PMMF resilience. We trust our recommendations will be helpful for the PWG as it considers the next steps with respect to PMMF reform.

We are available for any required clarifications or any questions that you may have on the recommendations outlined above.

Yours sincerely,

Adam L. Dener
Managing Director
Fermat Capital Management, LLC

cc: Secretary Janet Yellen, US Department of the Treasury
Chair Jerome Powell, Board of Governors of the Federal Reserve System
Acting Chair Allison Herren Lee, Securities and Exchange Commission
Acting Chair Rostin Behnam, Commodity Futures Trading Commission