Minutes of the Annual Meetings
of the Members of MassHousing and its Affiliates:
the Massachusetts Housing Finance Agency Property Acquisition and Disposition Corporation (PADCO)
and the Center for Community Recovery Innovations, Inc. (CCRI)
held on October 13, 2020

The annual meetings of the Massachusetts Housing Finance Agency – doing business as MassHousing – and its affiliates - the Massachusetts Housing Finance Agency Property Acquisition and Disposition Corporation (PADCO) and the Center for Community Recovery Innovations, Inc. (CCRI) were held on October 13, 2020. In accordance with the Order Suspending Certain Provisions of the Open Meeting Law, GL.c.30A Section 20 issued by Governor Baker on March 12, 2020, no Members were physically present and the meetings were conducted remotely through a publicly accessible Zoom meeting.

Participating remotely were the Members (by roll call):

Members Michael Dirrane, Chair
Mark Attia, Designee of Michael Heffernan, ex officio
Carolina Avellaneda
Lisa Serafin
Ping Yin Chai
Andris Silins (joined at 2:55 pm)
Patricia McArdle
Jerald Feldman

Members Not Participating Jennifer Maddox, ex officio

Staff *Due to the remote convening, a list of MassHousing staff participating or observing the meeting was not available*

Guests *Due to the remote convening, a list of guests observing the meeting was not collected*

Chairman Dirrane requested that Vice Chair Chai run the meeting. Vice Chair Chai convened the meeting to order at 2:00 p.m.

He indicated that the first order of business was the approval of the minutes of the previous meeting. Upon a motion duly made and seconded, it was, by roll call vote of all the present Members:

VOTED: That the minutes of the meeting held on September 8, 2020 are hereby approved and placed on record.

Vice Chair Chai then called upon Chrystal Kornegay, MassHousing's Executive Director, for her monthly report to the Members.

Executive Director's Report

Ms. Kornegay began by discussing the ways MassHousing is addressing the issue of racial inequity. MassHousing recently held a Town Hall meeting, "Addressing Racial Inequities," in which over 100 MassHousing staff voluntarily participated. A working group was formed and is organizing ideas from the Town Hall into actionable themes in the areas of business development, policy and practice, community resilience and recruitment and retention. Ms. Kornegay indicated she hopes to bring results to the Board in December or January.

Ms. Kornegay then discussed the Eviction Moratorium currently in place. The Massachusetts eviction moratorium is expected to expire on October 17, 2020. If it expires, the CDC Moratorium will still be in effect and will expire on December 31, 2020. The CDC Moratorium has additional criteria and some differences. The major difference is that the CDC Moratorium will allow the court process for evictions to proceed while the Massachusetts Moratorium does not let the eviction process begin.

On October 12, 2020 Governor Baker announced a $171 million Eviction Diversion Initiative plan to provide resources and programs to renters, particularly families with school-aged children.

Ms. Kornegay continued by discussing MassHousing's Business Operations Transformation Plan being created with the assistance of Ernst & Young which will guide our efforts to be effective and efficient, regardless of location. On a given day we currently have approximately 7 to 15 people in the office out of approximately 330 staff. This effort will also review our lease at One Beacon and assess our space needs going forward. The expectation is to have a plan to present to the Board at the December board meeting.

Finance Update and Vote Regarding the Opportunity Fund

Charles Karimbakas began his presentation by discussing MassHousing's FY20 Financials issued on September 25, 2020. Total net income was $149 million, up significantly from FY19. Operating revenue (investment income, fee income, grant income) was up $78 million and Operating expenses (interest expense, finance costs, grant expenses) was up $13 million. Total assets increased 7.8% to $5.95 billion and mortgage loans increased 5.5% to $2.88 billion.

Mr. Karimbakas continued by stating budget basis net income (which does not include market-to-market, loan loss or special items and does not capitalize certain items like servicing rights) was $124 million, $88 million ahead of FY20 budget of $36 million. Net grant activity was $88 million in FY20. Excluding grant activity, net income equal to FY20 budget of $36 million. Net interest spread was $6 million unfavorable to the FY20 budget, primarily due to a decrease in interest rates. Fee income was $5 million favorable to the FY20 budget, driven primarily from Home Ownership lending, MIF and PBCA fee income. Administrative expenses were $3 million favorable to the FY20 budget, primarily due to lower payroll costs, professional fees and lower IT costs.

The Opportunity Fund was budgeted at $2.7 million. The actual Opportunity Fund is $89 million and includes funds from the GE sale granted by Governor Baker to be used in our Commonwealth Builder Program for homeownership development in communities of color.

Ping Yin Chai asked if any of the $89 million has been spent yet. Ms. Kornegay replied the money has not been spent yet but has been budgeted for the Commonwealth Builder Program and the Springfield project. Mr. Karimbakas added we will spend much less than budgeted.

Ping Yin Chai asked if the $89 million can be comingled. Mr. Karimbakas replied the funds are all in the Opportunity Fund and are comingled, but we can track it separately.

Upon a motion duly made and seconded, by roll call vote of all the present Members, it was

VOTED: To deposit 50% of excess earnings (after bond program transfers) for FY20 in the amount of $10,980,000 into the Opportunity Fund.

Vote Delegating Authority to Issue Single Family Bonds and/or Notes

Mr. Karimbakas presented a proposed resolution for delegation of authority to issue HomeOwnership bonds and/or notes to finance up to $300 million using a mix of fixed rate and/or hedged or unhedged variable rate debt. This delegation vote along with a memorandum from cfX Incorporated ("cfX"), MassHousing's financial advisor, will also satisfy the requirements of the State Finance Governance Board with respect to derivative contracts associated with MassHousing financings. The cfX memo provides a detailed explanation of the HomeOwnership potential financings through the end of calendar year 2021 that is consistent with debt, swap, and investment policies and with current bond ratings.

The first transaction under this vote is expected to close in December with Morgan Stanley as the senior underwriter.

Upon a motion duly made and seconded, it was, by roll call vote, approved by all the Members present:

A RESOLUTION OF THE MASSACHUSETTS HOUSING FINANCE AGENCY ADOPTING SUPPLEMENTAL RESOLUTIONS AND/OR SUPPLEMENTAL TRUST INDENTURES RELATED TO THE ISSUANCE AND SALE OF NOT EXCEEDING $300,000,000 AGGREGATE PRINCIPAL AMOUNT BONDS AND/OR NOTES AND AUTHORIZING OFFICERS OF MASSHOUSING TO APPROVE CHANGES THERETO AND AUTHORIZING THE NEGOTIATION AND APPROVAL OF CERTAIN OTHER DOCUMENTS IN CONNECTION THEREWITH

WHEREAS, the Massachusetts Housing Finance Agency ("MassHousing") previously (i) adopted its Single Family Housing Revenue Bond Resolution (as amended to date, the "Resolution") and (ii) entered into a Trust Indenture relating to its Residential Mortgage Revenue Bonds (Mortgage-Backed Securities) (as amended to date, the "Trust Indenture"), each authorizing the issuance of bonds and/or notes for the purposes of financing or refinancing Whole Mortgage Loans, Home Improvement Loans, Cooperative Housing Loans or Mortgage-Backed Securities, refunding other obligations of MassHousing and establishing reserves therefor, as applicable, all in furtherance of MassHousing's Home Ownership Program;

WHEREAS, in order to maintain the continuity of the Home Ownership Program, and in furtherance of the provision of owner-occupied, single-family housing to low and moderate income persons and families in the Commonwealth, MassHousing desires to provide for (i) the adoption of one or more supplemental resolutions pursuant to the Resolution and (ii) the execution of one or more supplemental trust indentures pursuant to the Trust Indenture, authorizing the issuance of one or more series of bonds and/or notes to finance or refinance certain Whole Mortgage Loans and Mortgage-Backed Securities, as applicable, approved by MassHousing (collectively, the "Loans") to be designated by an Authorized Officer;

WHEREAS, MassHousing desires to adopt such resolutions and agreements as may be necessary to effectuate the foregoing purposes and to provide for the modification of such resolutions to the extent necessary; now, therefore, be it

RESOLVED, by the Members of MassHousing as follows:

Section l. MassHousing hereby (i) adopts one or more Supplemental Resolutions (the "Supplemental Resolutions"), authorizing the issuance of Bonds and/or Notes under the Resolution, and (ii) approves the execution of one or more Supplemental Trust Indentures (the "Supplemental Trust Indentures"), authorizing the issuance of Bonds under the Trust Indenture, with an aggregate principal amount not to exceed $300,000,000 (the "Obligations"). The Supplemental Resolutions and the Supplemental Trust Indentures shall be in substantially the forms previously used by MassHousing, with such changes as shall be deemed necessary in accordance with Section 3 of this resolution. The Obligations may be issued in one or more series and shall be secured by and payable from (i) in the case of Obligations issued under the Resolution, any and all Revenues in accordance with the Resolution and (ii) in the case of Obligations issued under the Trust Indenture, the security and collateral set forth in the applicable Supplemental Trust Indenture. Any Obligations issued pursuant to this resolution shall be delivered on or before December 31, 2021.

Section 2. MassHousing hereby adopts a Supplemental Resolution, which may be part of or separate from the Supplemental Resolutions authorized in Section 1 above, for the purpose of amending the Resolution to set forth therein the treatment of hedging transactions entered into with respect to Bonds and/or Notes issued under the Resolution.

Section 3. The Obligations shall be sold to one or more members of MassHousing's approved underwriting team in accordance with the terms of one or more bond purchase agreements in substantially the forms previously used by MassHousing with respect to its single family housing revenue bond programs, with such changes, interest rates, redemption provisions and maturity schedules as shall be approved by an Authorized Officer, and the same are authorized to execute and deliver the bond purchase agreements. The Obligations issued under the Resolution may be issued and sold as (i) one or more series of "Fixed Rate Bonds" or "Variable Rate Bonds" or "Compound Interest Bonds" or "Discount Bonds," (ii) one or more series of Notes or (iii) "Tender Bonds," as each such term is defined in the Resolution. The Obligations may be sold at a purchase price which reflects an aggregate underwriting fee or discount of not more than 2% of the principal amount of the Obligations issued.

Section 4. The Executive Director, Chairman, Vice President of Home Ownership Programs or Financial Director are each hereby authorized, acting singly, to take whatever action is necessary to carry out the issuance and sale of the Obligations including, without limitation, determining the amount of fixed rate, variable rate, compound interest or discount bonds to be issued and the terms and conditions thereof, including the series designation(s) thereof, the date or dates of issuance and sale thereof, the maturity and interest payment dates thereof, the redemption or tender dates, if any, therefor and the establishment of funds and accounts under the Resolution or the Supplemental Trust Indenture, as applicable, to account for the proceeds thereof. The Executive Director, Chairman, Vice President of Home Ownership Programs or Financial Director are further authorized, acting singly, to make such changes, additions and revisions to the Supplemental Resolutions, the Supplemental Trust Indentures and the documents and agreements referred to herein and therein, as are necessary to effectuate the purposes thereof and the purposes set forth in this resolution.

Section 5. In connection with the issuance of any Obligations, the distribution of one or more Preliminary Official Statements by an Authorized Officer is hereby approved. The Authorized Officers are each hereby authorized to permit the distribution of one or more final Official Statements, with such changes, omissions, insertions and revisions from the preliminary form thereof as they shall deem advisable and made pursuant to the bond purchase agreement authorized in Section 2 above, and to execute such final Official Statements.

Section 6. In connection with the issuance of any Obligations, MassHousing may enter into one or more remarketing agreements, standby bond purchase agreements, credit enhancement agreements or other liquidity agreements with respect to the Obligations ("Related Agreements"). The form of such Related Agreements shall be approved by an Authorized Officer, and the same are authorized to execute and deliver such agreements.

Section 7. In connection with the issuance of any Obligations, MassHousing may enter into one or more interest rate swap transactions, forward rate transactions, forward bond purchase transactions, cap transactions, floor transactions, collar transactions, rate lock transactions or other similar transactions ("Transactions"). The Authorized Officers are authorized to enter into such Transactions and to execute and deliver all agreements necessary or desirable therefor with one or more financial institutions selected by such Authorized Officers, and to pledge and apply such collateral held under the Resolution or the Supplemental Trust Indenture or otherwise held by MassHousing as shall be required by any such Transaction or any insurance therefor, subject to the pledge of any such collateral held under the Resolution or the Supplemental Trust Indenture, as applicable, for the benefit of the holders of all bonds and notes outstanding thereunder, in each case on such terms and conditions as such Authorized Officers shall determine to be in the best interest of MassHousing.

Section 8. The Authorized Officers are, and each of them is, authorized in their discretion to obtain a commitment from an Insurer (as such term is defined in the Resolution) selected by such Authorized Officers to insure all or any portion of the principal and interest payable on the Obligations issued under the Resolution on such terms and conditions as such Authorized Officers shall determine is in the best interests of MassHousing and approve (which terms and conditions shall be set forth in the applicable Supplemental Resolution). If MassHousing shall obtain an insurance policy from an Insurer to insure the Obligations issued under the Resolution, the Authorized Officers are further authorized to execute and deliver such agreements with the Insurer, or to include provisions in the Supplemental Resolutions, containing such terms, covenants and undertakings of MassHousing, as such Authorized Officers shall determine to be in the best interest of MassHousing.

Section 9. In the event the Obligations are not issued prior to the maturity date of all or any portion of any bonds (the "Prior Bonds") to be refunded with proceeds thereof, the Authorized Officers are, and each of them is, authorized in their discretion to draw amounts under the Second Amended and Restated Revolving Loan Agreement dated November 9, 2017, by and between MassHousing and Bank of America, N.A., as previously amended and as it may be further amended from time to time, sufficient to pay the principal amount of such Prior Bonds and to apply such amounts to such payment on such maturity date, provided that the amount so drawn shall be repaid from the proceeds of the Obligations upon the issuance thereof as provided in the Supplemental Resolutions.

Section 10. MassHousing may make or finance, on an interim basis, certain Loans, which costs are reasonably expected to be paid or reimbursed with the proceeds of debt to be incurred by MassHousing in the maximum amount of $300,000,000 and with respect to any such expenditures, this resolution is intended to satisfy the technical requirements of Treasury Regulations §1.150-2(d)(1).

Section 11. MassHousing authorizes any Authorized Officer to submit the proposed terms of any transaction authorized above to the State Finance and Governance Board as may be necessary for their review in accordance with Section 98 of Chapter 6 of the General Laws, as amended, and the regulations promulgated thereunder.

Section 12. As used in this resolution, the term Authorized Officer shall mean MassHousing's Chairman, Vice Chairman, Treasurer, Secretary, Executive Director, Vice President of Home Ownership Programs, Financial Director, General Counsel, Comptroller, Director of Finance and Bond Compliance, or any person serving in any of the foregoing positions in an "Interim" or "Acting" capacity at the direction of the Members of MassHousing, any Member of MassHousing, or any other Authorized Officer of MassHousing as defined in the Resolution or a Supplemental Trust Indenture.

Section 13. This resolution shall take effect immediately.

Attached is a delegation of authority to issue Multi-Family bonds and/or notes to finance up to $400 million using a mix of fixed rate and/or hedged or unhedged variable rate. This delegation vote along with a memorandum from CSG Advisors ("CSG"), MassHousing's financial advisor, will satisfy the requirements of the State Finance and Governance Board with respect to derivative contracts associated with MassHousing financings. The CSG memo provides a detailed explanation of the Multi-Family potential financings through the end of calendar year 2021.

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C F X I N C O R P O R A T E D

Memorandum

Date: October 5, 2020

To: Charles C. Karimbakas, Paul Scola

From: Jeremy Obaditch, Alex Fields

Re: Single Family Program: Review of Variable Rate Debt and Interest Rate Swap Opportunities for Submission to State Finance and Governance Board

A. Introduction

cfX has been engaged by the Massachusetts Housing Finance Agency ("MassHousing") to identify and examine the benefits and risks associated with incorporating variable rate debt in furtherance of its single family program. To date MassHousing has almost exclusively used fixed rate debt to purchase single family loans to be held in the Single Family Housing Revenue Bond Resolution (the "Resolution"). Today approximately 93% of the outstanding debt in the Resolution is fixed rate. The addition of new variable rate debt, in reasonable amounts, and in combination with interest rate swaps to reduce interest rate risk, will enable MassHousing to lower the future cost of debt. This will allow MassHousing to provide lower mortgage rates to its borrowers, help fund the down payment assistance program, maintain positive net income and balance sheet growth, and preserve the high ratings of "Aa1" and "AA+" assigned by Moody's Investors Service Inc. ("Moody's") and S&P Global Ratings ("S&P"), respectively.

This memorandum reviews the various types of variable rate debt and interest rate swaps available to MassHousing and examines the potential benefits and risks associated with these instruments in the context of the Resolution. Each of the proposed debt structures, swaps, counterparties and other components of future transactions in the Resolution will conform with all MassHousing requirements including delegation votes, its Swap Policy, the Debt Management Policy and the Investment Policy (collectively, "MassHousing Policies").

B. Types of Variable Rate Debt Instruments

Today's municipal bond market provides MassHousing with the opportunity to substitute a portion of the fixed rate debt that will be issued in the future with various types of variable rate debt instruments. Some of the more well established variable rate debt instruments used in the municipal bond market today utilized by state housing agencies include Variable Rate Demand Bonds ("VRDBs") and Floating Rate Notes ("FRNs"). All variable rate debt instruments provide bond investors with an interest accrual rate that is reset on a specified frequency that can be daily, weekly, monthly or longer. Payment of the actual interest due on variable rate debt is traditionally semi-annual or monthly for housing issuers. Both VRDBs and FRNs are well established debt instruments in the municipal

bond market and have been used by housing finance agencies around the country to help finance the purchase of single family and multi-family loans.

VRDBs differ from FRNs in several ways. VRDBs require a remarketing agent, typically an investment bank, to reset the interest accrual rate based on market feedback, at regular intervals. VRDBs also include a "put" or optional tender feature that allows investors to return their bonds to the issuer at a price of par if they no longer wish to own the bonds, at the time of each interest rate reset. At this point the remarketing agent is obligated to find new investors to purchase the bonds. Tender dates are typically the same as interest rate reset dates. To support the remarketing agent all VRDBs must also include a Standby Bond Purchase Agreement, or other equivalent so-called liquidity facility. This is provided by a financial institution who will purchase the bonds from the issuer if the remarketing agent is unable to find enough investors to purchase the tendered bonds at the time of the interest rate reset. The provider of the liquidity facility, or counterparty, is an important aspect of VRDBs as investors will typically require an interest rate that is based in part on the name and credit quality of that counterparty. MassHousing VRDBs would be expected to be secured by liquidity facilities offered only by highly rated providers in compliance with MassHousing Policies.

VRDB remarketing agent agreements are specified for the life of the bonds, with a specified fee in the five to eight basis points per year range. Fees for remarketing agents have been declining over recent years due to competition and the entry of newer non-traditional Alternative Trading Systems offering similar remarketing services. Counterparty risk that the remarketing agent will be unable to fulfill its duties exists for all issuers of VRDBs. Substitution of a poorly performing or disabled remarketing agent occurs occasionally.

VRDB liquidity facility agreements are specified for terms ranging from one to seven years in today's market. Longer terms require greater fees, and most agreements priced in today's market are made in the three to five year range at rates of between 25 and 40 basis points per year. An issuer will be required to renegotiate the terms of the liquidity facility at the end of the term with the existing counterparty or solicit bids from other providers. During the debt crisis many low rated liquidity facilities were replaced before expiration by more highly rated counterparties. Issuers of VRDBs have both counterparty risk associated with the provider of the facility and renewal risk that the rate for the next specified term will be higher than the previous term.

FRNs are variable rate debt instruments where the interest rate is based on a specified benchmark index, such as SIFMA or LIBOR, plus a spread for a specified initial term, typically three to seven years. At the end of the initial term a mandatory tender occurs that requires all FRN investors to return their bonds to the issuer for cancellation. At the end of the initial term the issuer may re-issue the bonds as FRNs using a similar or different index, spread or term and a new mandatory tender date. An issuer may also decide to retire the debt, or convert the debt to VRDBs or fixed rate debt.

If the issuer is unable to execute the mandatory tender and pay the principal and interest due on the bonds, the variable interest rate escalates to a pre-set, high fixed rate, such as 9%, that incentivizes the issuer to find a solution to redeem the bonds quickly. This so called "Soft Put" feature of FRNs, which are typically designed to avoid an event of default under the resolution even if the tender fails, is an attractive feature for issuers who have adequate liquid investments or cash to repay FRNs if market access is unavailable.

Tax-Exempt FRNs use the weekly SIFMA index or 67-70% of the 1 or 3 month LIBOR index, and taxable FRNs use 100% of the 1 or 3 month LIBOR index. Interest is reset on a pre-specified frequency that can be weekly, monthly or longer. A fixed spread, in basis points, is determined by the underwriter at the time of the initial sale that reflects the credit quality of the issuer and to compensate the investor for the lack of any short term "put" feature or liquidity facility that is available in a VRDB. The spread is added to the index rate to arrive at the total variable interest rate for any period. FRNs do not require a remarketing agent or a liquidity agreement and spreads in the current market have typically been lower than the combined cost of the fees for remarketing and liquidity in the VRDB market. While issuers do not have counterparty risk with FRNs, they do have renewal risk - that at the time of the mandatory tender the market-based spread to the benchmark index, or the overall interest rates in the market, will be higher than the prior term. Table 1 below summarizes several of the differences between VRDBs and FRNs.

Table 1. Summary of Variable Rate Debt Instruments

Type	Public or Private Placement	Remarketing Agent	Liquidity Facility	Rate Reset	Counterparty Risk	Renewal Risk
VRDB	Public	Yes	Yes	Remarketing	Yes	Yes
FRN	Both	No	No	Index	No	Yes

C. Types of Interest Rate Swaps

In conjunction with the sale of any form of variable rate debt many issuers choose to enter into an interest rate swap with a selected counterparty. This allows an issuer to hedge all or a portion of their exposure to future rising short-term interest rates. A standard interest rate swap for an issuer of variable rate bonds is designed such that an issuer pays a fixed rate of interest in return for receiving a variable rate of interest. In simple terms this allows an issuer to receive approximately the same variable rate of interest that it is paying on the VRDBs or FRNs so that the short term rates paid and received cancel each other out. The issuer is left only with the payment of the fixed rate on the swap effectively converting variable rate debt to synthetic fixed rate debt. In practice it is almost impossible or too expensive to design a swap that will receive exactly the same interest rate that is paid on the VRDBs or FRNs. This mismatch is called basis risk which means that the basis for the short-term variable rate payments on the bonds will be somewhat different than the basis for the short-term variable rate receipts for the swap. One of the goals when designing swaps is to minimize the basis risk but some will likely be present over the life of the swap.

Most of recent swaps used to hedge tax-exempt variable rate debt by state housing agencies are based either on the weekly SIFMA tax-exempt index for the life of the swap, or start with the SIFMA index and then convert to a percentage (typically 67-70%) of the taxable 1 or 3-month LIBOR index, a so-called hybrid swap using both the tax-exempt and the taxable indices over the life of the swap. Use of the SIFMA index to hedge tax-exempt bonds minimizes basis risk as the issuer's tax-exempt VRDBs are expected to trade very close to SIFMA. Use of a percentage of the LIBOR index to hedge tax-exempt bonds has declined significantly in the last year as market participants confront the impending sunset of the LIBOR indices in December 2021. Previously LIBOR based swaps had priced at a rate that is 40-50 basis points lower than a SIFMA based swap but these LIBOR based swaps also create substantial basis risk. The pricing difference has been due to the much greater liquidity in the LIBOR market versus the relatively small SIFMA swap market.

Traditionally a ratio of 70% of 3-month LIBOR has correlated reasonably well with SIFMA and many issuers have chosen to hedge their variable tax-exempt bonds with lower cost percentage-of-LIBOR swaps. However, uncertainties related to investor behavior after passage of the new tax law, combined with the reduction of the corporate tax rate from 35% to 21%, make it impossible to know how well this previous correlation will persist into the future. To the extent that SIFMA and tax-exempt variable rate bond rates lose some of their tax advantage and the ratio of SIFMA to LIBOR increases to potentially 80% or 90%, swaps receiving only 70% of LIBOR will be short of the payment that will be due to the bondholder. This would require issuers to not only make the fixed payment on the swap but also to make up the shortfall from the reduced receipts on the swap to pay the variable rate bond holders. This is how basis risk could be manifest in variable rate transactions. This specific type of basis risk where an issuer is using a taxable swap to hedge a tax-exempt bond is often called tax risk.

If an issuer is looking to hedge taxable variable rate bonds, then accessing the LIBOR swap market can minimize basis risk as no tax risk will be apparent.

Interest rate swaps are negotiated with a counterparty and thus have embedded counterparty risk. If the provider of the swap is unable to perform its duties the bond issuer may no longer receive the variable rate interest payments necessary to offset the variable rate payments due on the bonds. While counterparty bankruptcies are rare, they have occurred, especially during the 2008 financial crisis. Issuers may be exposed to potential renewal risk to replace a terminated swap, which may be in addition to the administrative burden and unexpected additional economic costs of the existing swap.

One of the most important features of a swap is an issuer's right or option to cancel a swap at par with no additional expense on or after a specified date. Today almost all housing bond issuers enter into swaps with par cancellation options that are no later than the optional call date on the associated fixed rate bonds, typically nine or ten years. Many of the headlines from the 2008 financial crisis that related to swaps were the result of issuers purchasing long-dated noncallable swaps without realizing that they had no means of cancelling the agreement at par if interest rates fell (although such swap agreements could have been terminated at a market cost). Many of those issuers were stuck paying high above-market interest rates with no feasible ability to replace the swap at lower rates. While shorter cancellation options increase the rate paid by issuers on the swap, most housing agencies are purchasing swaps with cancellation options in the five to ten-year range. Purchasing these options also allows an issuer to hedge against basis, tax and counterparty risk by providing a costless exit.

The choice of how much of the variable rate bonds to hedge is another important decision for variable rate bond issuers. Many state housing agencies choose to hedge 75-80% of their variable rate bonds, as most agency balance sheets hold large amounts of short-term investments in the form of money market investments which act as a natural hedge against rising variable bond rates. If short term interest rates rise it would be expected that the rates on both the short-term investments and short-term variable rate bonds will also rise, mitigating the risk of interest rate risk.

Overall, swaps are attractive to state housing agencies as they allow issuers to lower the cost of the highest rate 30-year bonds by as much as 1% when factoring in the swap pay rate, basis risk, fees for VRDBs or spreads to FRNs and par cancellation options that are recommended. Saving 1% on the long-term bonds can save as much as 50 basis points on an overall issue, allowing an issuer to offer lower mortgage rates or increase earnings. Most of the state housing agencies with the lowest mortgage rates use a combination of fixed rate and variable rate bonds with swaps to finance their loan or MBS purchases. Today, many of these housing agencies use a combination of SIFMA-LIBOR hybrid swaps or pure SIFMA swaps with unhedged bonds to achieve their financial and programmatic goals.

Active steps are underway to replace the LIBOR index in the next several years. At this time it is impossible to know how any new replacement indices will perform relative to the prior LIBOR index. Table 2 below summarizes the risks that HFAs need to consider when evaluating the use of swaps.

Table 2. Summary of Risks Related to Interest Rate Swaps

Variable Bond Type	SIFMA Swap Tax Risk	LIBOR Swap Tax Risk	Basis Risk	Counterparty Risk
Tax-Exempt	Minimal	High	Yes	Yes
Taxable	High	Minimal	Yes	Yes

D. Pro-Forma Alternative Debt Structures

cfX has designed and evaluated several alternative MassHousing single family program debt structures that use a combination of fixed and variable rate debt to identify the costs and benefits of using variable rate debt for a portion of the financings contemplated for calendar year 2021. Due to the lack of tax-exempt volume cap available to the single family program, these alternatives assume that 30% of the bonds issued in calendar year 2021 will be issued as taxable bonds.

The alternative debt structures have between 20% and 40% of the bond issue composed of variable rate debt, either tax-exempt or taxable debt. In calendar year 2021 it is expected that each bond issue would consist of between 15% and 30% of variable rate bonds with the balance consisting of traditional fixed rate debt.

Each of the alternative debt structures assume all of the variable rate bonds are hedged with SIFMA based swaps with an amortization that matches the underlying bonds and a nine and one-half year par cancellation option that matches the expected par optional call date on the fixed rate bonds. MassHousing may choose to leave a portion of their variable rate bonds unhedged to provide bond redemption flexibility and can rely on short-term variable rate money market assets in the Resolution that can provide a hedge against rising short term interest rates. MassHousing may also choose a shorter or longer par call option or choose a swap with a different amortization. Each of those decisions would be evaluated during the design of the structure to ensure that the swap was consistent with the MassHousing Policies and all rating agency requirements necessary to maintain the current rating.

Each of the tax-exempt and taxable variable rate debt executions outperform their 100% fixed rate counterparts across a range of reasonable interest rate and prepayment scenarios. Savings from the use of variable rate bonds range from 10 to 50 basis points depending on the percentage of variable rate debt and the duration of the swap.

E. <u>Performance of Alternative Variable Rate Structures in the Resolution</u>

cfX has evaluated selected alternative debt structures in the context of the overall Resolution to ensure that all the rating agency cash flow stress tests can be satisfied to ensure that any new debt that is issued will maintain the current high debt ratings from Moody's ("Aa1") and S&P ("AA+").

The most recent set of Resolution cash flows provided to the rating agencies project $196 million of net assets on November 1, 2020, or a parity ratio of approximately 119%. The rating agencies generally expect that the resolutions of large, sophisticated housing bond issuers that are using variable rate debt and swaps to finance their lending programs should have at least 110% of resolution asset parity. The $196 million of net assets means that the Resolution has approximately $93 million of additional net assets in excess of this 110% threshold.

The most recent set of Resolution cash flows provided to the rating agencies showed that the Resolution is composed of 93% fixed rate and 7% variable rate debt. In calendar year 2021 based on a $300 million total issuance target, the addition of reasonable amounts of variable rate debt consisting of approximately 15% to 20% variable rate debt for each bond issue will increase the percentage of variable rate debt in the Resolution to 9% to 10%. Moody's criteria for Aa1 rated debt specifies a preferred range of no more than 10% to 25% of variable rate debt outstanding. Contemplated variable rate debt amounts for calendar year 2021 will result in ratios that are at or below the lowest part of this range. Furthermore MassHousing will retain sufficient capacity to add variable rate debt as part of combined fixed and variable rate debt structures in the coming years.

Many state housing agencies choose to hedge a majority but not all of their variable rate debt with swaps, leaving the balance of variable rate debt unhedged. Carrying unhedged variable rate debt has allowed housing agencies to lower their cost of funds, increasing income and providing lower mortgage rates to their borrowers. In addition, unhedged variable rate debt in an issue can help facilitate certain future debt transactions that may be required by the IRS tax regulations applicable to housing issuers, such as 10 Year Rule calls and yield participations. Overall a combination of roughly 75% hedged and 25% unhedged variable rate debt is generally preferable to a 100% hedged structure.

Currently $34.0 million of outstanding variable rate debt is unhedged in the Resolution, representing a relatively small 3.3% of all bonds outstanding. If MassHousing decides to hedge 75% of the $45 to $60 million of variable debt contemplated for calendar year 2021 transactions, then the amount of unhedged variable rate would increase to between $45 and $49 million, representing 3.4% to 3.7% of all resolution debt outstanding.

On average the Resolution carries $80 million to $90 million of funds in money market instruments, providing a significant natural hedge against rising short term interest rates. The rating agencies are comfortable with sophisticated, large parity issuers of housing bonds carrying unhedged variable rate debt based on these natural hedging resources based on the expectation that short term interest rates on investments will tend to rise as the short term interest rates on unhedged variable rate bonds rise.

Moody's also specifies a preference for unhedged variable rate debt of no more than 10% of all debt outstanding. The addition of $11 to $15 million of unhedged variable rate debt contemplated in calendar year 2021 will result in ratios that are well below Moody's limit for unhedged variable rate debt.

Each of the alternatives that we evaluated in the rating agency Resolution cash flow stress tests has passed all of the rating agency requirements, demonstrating sufficient net income and asset parity coverage to warrant an affirmation of the current Aa1 and AA+ ratings from Moody's and S&P, respectively. Given the substantial strength of the Resolution, MassHousing, if it so desires, will be able to repeat the contemplated program of fixed and variable rate single family issues for many years with no adverse impact on the ratings.

F. Summary

cfX analyzed the addition of between $40 and $60 million of new variable rate debt in calendar year 2021 to fund the single family program. Each of the proposed debt structures, swaps, counterparties and other components of future transactions in the Resolution will conform with all MassHousing requirements including delegation votes and the MassHousing Policies.

The combination of using fixed rate and variable rate debt to finance the single family program, in combination with interest rate swaps to reduce interest rate risk, will enable MassHousing to lower the future cost of debt. Variable rate debt creates 10 to 50 basis points of additional spread under expected interest scenarios. This will allow MassHousing to provide lower mortgage rates to its borrowers, maintain positive net income and grow the MassHousing balance sheet.

Cash flow stress tests using the adverse financial conditions required by the rating agencies were all successful. Currently only 7% of the Resolution debt is variable and the expected additions would keep the variable rate debt well within the levels preferred by the rating agencies. The high ratings of "Aa1" and "AA+" assigned by Moody's and S&P would be expected to be affirmed under any of the recommended financing scenarios.

G. cfX Incorporated

cfX is a Municipal Advisor to 14 different state housing agencies nationwide including some of the largest and the most complex housing finance issuers in the country. cfX specializes in the structuring of housing bonds to finance affordable housing and the management of complex single-family and multi-family parity bond portfolios. cfX has been engaged by MassHousing since 2004 and is a registered municipal advisor with the SEC and the MSRB.

Vote Delegating Authority to Issue Multifamily Bonds and/or Notes

Mr. Karimbakas presented a proposed resolution for delegation of authority to issue Multi-Family bonds and/or notes to finance up to $400 million using a mix of fixed rate and/or hedged or unhedged variable rate debt. This delegation vote along with a memorandum from CSG Advisors ("CSG"), MassHousing's financial advisor, will satisfy the requirements of the State Finance and Governance Board with respect to derivative contracts associated with MassHousing financings. The CSG memo provides a detailed explanation of the Multi-Family potential financings through the end of calendar year 2021 that is consistent with debt, swap, and investment policies and with current bond ratings.

The first transaction under this vote is expected to close in December with Barclays as the senior underwriter.

Upon a motion duly made and seconded, it was, by roll call vote, approved by all the Members present:

RENTAL DEVELOPMENT PARAMETERS RESOLUTION

WHEREAS, the Massachusetts Housing Finance Agency ("MassHousing") has previously adopted various general bond and note resolutions (the "General Resolutions") authorizing the issuance of bonds and/or notes for the purposes of financing or refinancing Rental Development Mortgage Loans and Construction Loans, refunding other obligations of MassHousing and establishing reserves therefor;

WHEREAS, in order to finance or refinance certain Rental Development Mortgage Loans and Construction Loans approved by MassHousing (the "Loans") to be designated by an Authorized Officer, MassHousing desires to provide for the adoption of one or more series resolutions pursuant to the General Resolutions authorizing the issuance of one or more series of bonds and/or notes;

WHEREAS, in furtherance of the provision of mixed income residential facilities, workforce housing and other housing available to low and moderate income persons and families in the Commonwealth, MassHousing desires to provide for the adoption of one or more series resolutions pursuant to the General Resolutions, authorizing the issuance of one or more series of bonds and/or notes;

WHEREAS, MassHousing desires to adopt such resolutions and agreements as may be necessary to effectuate the foregoing purposes and to provide for the modification of such resolutions to the extent necessary; now, therefore, be it

RESOLVED, by the Members of MassHousing as follows:

Section l. MassHousing hereby adopts one or more Series Resolutions (the "Series Resolutions"), authorizing the issuance of Bonds and/or Notes under one or more of MassHousing's existing rental development programs with an aggregate principal amount not to exceed $400,000,000 (the "Obligations"). The Series Resolutions shall be in substantially the form previously used by MassHousing, with such changes as shall be deemed necessary in accordance with Section 4 of this Resolution. The Obligations may be issued in one or more series or subseries. Any Obligations issued pursuant to this resolution shall be delivered on or prior to December 31, 2021.

Section 2. The Series Resolutions shall provide that the Obligations to be issued thereunder and any related interest rate swap agreements or other hedge agreements, as authorized below, shall be secured by and payable from any and all Revenues in accordance with the General Resolutions. MassHousing's obligations under the Obligations, any such swap or hedge agreements or any Related Agreement deemed necessary in accordance with Section 5 of this Resolution may also be secured as a general obligation of MassHousing.

Section 3. The Obligations shall be sold to one or more members of MassHousing's approved underwriting team in accordance with the terms of one or more bond purchase agreements in substantially the forms previously used by MassHousing with respect to its rental development bond programs, with such changes, interest rates, redemption provisions and maturity schedules as shall be approved by an Authorized Officer, and the same are authorized to execute and deliver the bond purchase agreements. The Obligations (i) may be sold on a tax-exempt basis, provided they do not bear interest at such rates and are not sold at such prices such that the yield on the Obligations exceeds the yield on 30-year Municipal Market Data index ("MMD") by more than 300 basis points, (ii) may be sold on a taxable basis under federal tax law, provided they do not bear interest at such rates and are not sold at such prices such that the yield on the Obligations exceeds the yield on 10-year U.S. Treasury securities by more than 400 basis points and (iii) may bear interest at fixed rates or at one or more variable rates determined in accordance with the provisions of the applicable Series Resolution; provided that at no time shall the outstanding principal amount of the Obligations authorized by this vote bearing interest at variable rates exceed $80,000,000. The Obligations may be sold at a purchase price which reflects an aggregate underwriting fee or discount of not more than 2% of the principal amount of the Obligations issued.

Section 4. The Executive Director, Chair, or Financial Director are each hereby authorized, acting singly, (i) to take whatever action is necessary, not inconsistent with this vote, to carry out the issuance and sale of the Obligations including, without limitation, determining the amount of fixed rate and variable rate to be issued and the rates, terms and conditions thereof, including the series designations, the dates of issuance and sale, the maturities and interest payment dates, the redemption or tender dates, if any, and the establishment of funds and accounts under the applicable resolution, to account for the proceeds thereof and (ii) to approve and execute such changes, additions and revisions to the Series Resolutions, including Series Resolutions with respect to Bonds previously issued under the applicable General Resolution, and the documents and agreements referred to herein and therein as are necessary to effectuate the purposes thereof and the purposes set forth in this resolution.

Section 5. In connection with the issuance of any Obligations, MassHousing may enter into one or more remarketing agreements, standby bond purchase agreements, credit enhancement agreement or other liquidity agreements with respect to the Obligations ("Related Agreements"). The form of such Related Agreements shall be approved by an Authorized Officer, and the same are authorized to execute and deliver such agreements and to amend the same from time to time.

Section 6. In connection with the issuance of any variable rate Obligations, MassHousing may enter into one or more interest rate swap agreements, forward rate transactions, forward bond purchase transactions, cap transactions, floor transactions, collar transactions, rate lock transactions or other similar transactions to fix the effective rate on the Obligations. The pricing and fixed rate under such agreements and transactions shall not exceed the yield on 30-year MMD by more than 300 basis points, if the related Obligations are tax-exempt, and the yield on 10-year U.S. Treasury securities by more than 400 basis points, if the related Obligations are taxable. The form of such interest rate swap agreements and the rates, terms and conditions thereof shall be approved by an Authorized Officer, and the same are authorized to execute and deliver such agreements.

Section 7. MassHousing authorizes any Authorized Officer, to submit the proposed terms of any transaction authorized above to the State Finance and Governance Board as may be necessary for their review in accordance with Section 98 of Chapter 6 of the General Laws, as amended, and the regulations promulgated thereunder.

Section 8. As used in this Resolution, the term Authorized Officer shall mean MassHousing's Chair, Executive Director, General Counsel, Financial Director, Comptroller, Director of Finance and Bond Compliance, and any officer or employee of MassHousing acting in such capacity, or any other Authorized Officer of MassHousing as defined in the General Resolutions.

Section 9. This resolution shall take effect immediately.

CSG advisors

1 Post Street, Suite 575
San Francisco, CA 94104
Phone: 415.956.2454

MEMORANDUM

Date:	**October 2, 2020**
To:	**Charles Karimbakas and Paul Scola**
From:	**Gene Slater**
Re:	**Multi-Family Authorization for Leveraging Variable Rate Debt for Submission to State Finance and Governance Board**

PROPOSED ACTION

MassHousing would like to authorize and potentially incorporate $80 million of variable rate debt for multi-family new production and refundings of outstanding issues through the end of calendar year 2021. These resources will be used in conjunction with at least $320 million of fixed rate debt to finance such loans.

KEY PURPOSE AND FEATURES OF THE PROPOSAL

Purpose

MassHousing seeks to provide lending for affordable multi-family housing developments involving substantial rehabilitation or new construction, in such a way as to:

- Offer attractive and feasible financing for projects that utilize 4% Low Income Housing Tax Credits;
- Provide such financing using its FHA Risk-Share program:
  - for up to 40 year fixed rate, fully amortizing loans,
  - so that borrowers can process projects significantly faster than under FHA MAP lending (whose delays have deterred many borrowers in New England);
- Enable MassHousing to add such lending to its balance sheet, so as to strengthen the agency's long-term sustainability; and
- Help maintain and strengthen the projected cash flow performance of its large Housing Bonds Resolution (the "Resolution).

In addition, MassHousing occasionally refunds its outstanding bonds when opportunities arise under the Resolution.

Multi-Family Loans Using Tax-Exempt Bonds

Multi-family lending for affordable rental housing with tax-exempt bonds is and has been a core part of MassHousing's mission and its history and balance sheet over more than 40 years. This is especially important because tax-exempt debt is necessary for projects to be able to obtain 4% federal low-income housing tax credits; such credits pay for approximately 30% of project development costs.

However, after the 2008 financial crisis, long-term tax-exempt bond rates exceeded taxable rates on government-backed debt. MassHousing, like other housing finance agencies, sought ways to finance projects with long tax-exempt bonds at competitive rates.

After the U.S. Treasury's New Issue Bond Program expired in 2012, MassHousing became the national leader in using Treasury and HUD's program to finance risk-share loans through the Treasury's Federal Financing Bank ("FFB"), but the FFB program is now closed to any new commitments.

2015 Program Using $50 million of Variable Rate Debt

Beyond using these Federal initiatives, MassHousing established in 2015 its own program to leverage fixed rate debt in order to provide a lower blended cost to the borrower. By using indenture cash in place of the longest term and highest cost long-term bonds, and a limited amount of variable rate debt, MassHousing has been able to significantly lower mortgage rates to borrowers.

The aim was to fund $250 million of new risk-share loans, using a maximum of $50 million variable rate debt (e.g. up to 20% of the total). In practice, MassHousing sparingly invested such variable rate debt, averaging 7% of new lending, rather than 20%. As a result, MassHousing used the $50 million of variable rate capacity to finance a total of $675 million of new loans. At the same time, it exceeded its target of earning at least 50 basis points spread; its aggregate spread was over 65 basis points in addition to its servicing fee.

This leveraging program enabled MassHousing to:

- Reduce the average bond yield on these financings by up to 50 basis points compared to traditional fixed rate financing.
- Significantly increase spread to cover MassHousing's long-term operations. The average spread of 65 basis points (in addition to servicing) was significantly greater than what the Agency would have achieved with traditional tax-exempt financing.
- Maintain and increase multi-family production, by providing attractive financing and transparency in the formula of how loan rates are set.
- Increase the return on cash in the indenture.
- Help make the successful case to S&P and Moody's to upgrade the ratings of the indenture, which have increased from AA- to AA, and from Aa3 to Aa2 respectively. This in turn has lowered the cost on all new bonds issued under the Housing Bond indenture.

Since the program has fully utilized its commitment of variable rate debt, the Agency needs to authorize an additional amount of variable rate debt to continue a similar approach of being able to use variable rate as needed. In the fall of 2019, the State Finance and Governance Board authorized $60 million of variable rate debt for use during 2020, but as a result of the drop in rates due to the economic contraction from the pandemic, MassHousing was able to issue two series of fixed rate bonds totaling over $200 million without needing to use any of that variable rate authority which has now expired.

Therefore MassHousing is seeking authorization for variable rate debt for issues during calendar year 2021.

Proposal

Utilizing variable rate debt to help fund loans is essential for MassHousing to provide a feasible and attractive loan product for its core mission, while strengthening its Housing Bond Resolution.

As with the 2015 program, the new authorization would address this challenge, by building on the same key parameters:

- Provide at least $400 million of loans expected to be financed through the end of the next calendar year (by December 31, 2021).
- Fund the respective loans with a combination of:
    - fixed rate tax-exempt bonds for shorter maturities;
    - up to a maximum of $80 million of variable rate debt, of which at least half would be hedged to protect against interest rate risk; and
    - limit the actual amount of variable rate debt to that needed to meet MassHousing's target loan rates, investment rates and spread needed for the Housing Bond Resolution.
- Potentially use a portion of the $80 million of variable rate debt for refunding existing bonds, in order to improve economics of the indenture.

Criteria

In accordance with approach and the findings of the Risk-Based Capital Adequacy Study, from April 2014 and as updated in May 2019, we utilized the following criteria in determining that the proposed authorization helps meet the Agency's long-term objectives.

1. Attractive loan product for borrowers.
2. Finances developments on-balance sheet to provide ongoing spread income to MassHousing.
3. Provides reasonable net income for MassHousing given lending and servicing costs and risk exposure.
4. Maintains or strengthens the expected performance of the Housing Bond indenture, without adversely affecting any indenture ratings.
5. Maintains or strengthens the ability of the Housing Bond indenture to provide cash income to the Working Capital Fund to help fund MassHousing operations.

Risks and Mitigations

The potential liquidity, counterparty and interest rate risks of variable rate debt are being addressed as follows:

1. **Liquidity.** The variable rate debt will be structured as either Floating Rate Notes, similar to MassHousing's current FRN's, or variable rate debt without a tender feature, or through use of variable rate demand bonds similar to MassHousing's current VRDB's. The counterparty, if applicable, documentation, and variable rate will be structured (along with the fixed rate debt) so as to maintain the Resolution's current ratings of Aa2 by Moody's and AA by S&P. The minimum length of an FRN interest period or liquidity facility would be at least 3 years, which is typical among state housing finance agencies in entering into new liquidity facilities. While there is liquidity roll-over risk, when facilities terminate, this is most appropriately viewed in terms of the indenture as a whole, to minimize the amount of such risk in any given year.

2. **Interest Rate Swaps.** Interest rate swaps will be entered into for portions of the variable rate debt so as to help limit MassHousing's exposure to interest rate changes. Swaps would be utilized as follows:

   Timing: The interest rate swap will only be priced at the time when the fixed rate bonds are priced, in order to establish an overall loan rate for the borrower, and only after the borrowers have received firm commitment approval from MassHousing.

Index: The swap may either be based on SIFMA, LIBOR, a hybrid of both or any other index that is a successor to LIBOR.

Counterparty Rating: The counterparty must meet rating agency requirements for the Housing Bond Resolution when the swap is entered into.

Amortization: Principal amortization will be based on the amortization of the Risk-Share loan.

Par Termination at MassHousing's Option: The interest rate swap will be terminable at par commencing no later than 9 years. The borrower does not have the option to prepay the loan for at least 10 years, so this earlier par termination option for MassHousing provides protection well in excess of MassHousing's Swap Policy amortization provisions.

Unswapped Debt: Some or all of the variable rate debt used to refund outstanding bonds may be unhedged. The amount of such unhedged debt under the indenture would not exceed the total amount of indenture short-term cash investments; the cash provides, in effect, a natural hedge for unswapped debt. This approach allows MassHousing to improve indenture performance in low interest rate environments. As recommended in the 2019 capital adequacy study, it is desirable for MassHousing to improve such performance and thus reduce the agency's sensitivity to future interest rates. Unswapped debt would thus be used to the extent that is hedged by cash and where cash flow projections show that such unswapped debt reduces the agency's sensitivity to future interest rates. This approach can help lower the agency's financial risks.

Potential Risks: Following are key remaining risks and how they would be addressed:

Mandatory Loan Prepayment. If there is a mandatory prepayment of the loan (due to a loan default, property condemnation, or insurance claim) and the bonds are redeemed in whole or in part before the par termination option, MassHousing can utilize the swap for other unhedged debt under the Housing Bond Resolution. Because the swap rate is expected to be well below that on MassHousing's existing swaps (3% or less in the current market), the continued use of such swap is likely to be relatively attractive.

Swap Counterparty. Each swap would need to be in accordance with MassHousing's written Swap Policy which establish guidelines on counterparties and requirements.

There are potential risks if a swap counterparty is downgraded below minimum rating agency criteria in which case the swap may be disregarded in part or in whole by the rating agency (or if a swap counterparty were to file for bankruptcy). In such cases, MassHousing can seek novation from another provider. In addition, as described in the Swap Policy, MassHousing seeks to require that in the event of a downgrade below rating agency requirements, termination "occur on the side of the bid-offered spread most beneficial to the Agency."

REVIEW

CSG Advisors. As background, CSG Advisors is an independent national financial advisor to state and local governments. CSG has been the leading financial advisor for housing revenue bonds each year since 1999 according to Securities Data, and has served as independent advisor on more than $100 billion of housing revenue bonds. We have served as financial advisor to MassHousing, primarily for multi-family bonds since 2004. In 2013, and again in 2019, we prepared the agency's Risk-Based Capital Study.

CSG does not underwrite or sell bonds or other securities. Because of our independence, we served as the

Resolution Trust Corporation's national financial advisor for all tax-exempt related assets and HUD's national advisor for complex multi-family refundings. We helped initiate the design of what became the U.S. Treasury's national New Issue Bond Program and Temporary Credit and Liquidity Program for state and local housing finance agencies, in part to reduce the liquidity risks of housing finance agency from variable rate demand bonds with expiring or downgraded liquidity facilities.

SUMMARY OF FINDINGS

1. **Bond Ratings.** The variable rate bonds will be rated based on the Housing Bonds Resolution, Aa2 by Moody's and AA by S&P. The use of the amount and type of variable rate bonds proposed above should not adversely affect any of MassHousing's ratings.

2. **Swap Amortization to Reflect Loan.** Swaps will fully amortize over the term of the related loan(s). Swaps will be optionally terminable at par, beginning before the underlying mortgage loans may optionally prepay.

3. **Replacement Liquidity.** MassHousing will have the option to terminate the swaps at par in 9 years and thereafter, enabling it to refund the related variable rate bonds with fixed rate bonds and limiting its further exposure to higher costs for replacement liquidity.

4. **Other Approaches.** Other approaches, such as all long-term fixed rate bonds may not be economically feasible on many financings and can prevent MassHousing from earning a minimum spread while offering an attractive loan rate.

5. **Limited Amount of Proposed Variable Rate Debt**. The amount of proposed variable rate debt is limited to a maximum of an additional $80 million under this authorization, of which at least half would be hedged. If the full $80 million of variable rate debt is issued, it would be approximately 5% of the Housing Bond Resolution's total approx. $1.6 billion of outstanding debt.

   MassHousing has used variable rate debt modestly and has paid down a significant amount of its prior variable rate debt. The maximum proposed amount plus existing Floating Rate Notes and other variable rate debt is not projected to exceed 13% of all of the agency's debt.

6. **Rating Agency Cash Flow Stress.** This authorization is projected to improve the performance of the Resolution under the rating agency stress case (which is low short-term rates).

7. **Projected Performance.** As part of the 2019 risk-based capital study analysis, we requested and reviewed the Agency's cash flow projections. It is assumed that MassHousing's short-term investment rate averages the same as LIBOR (or its successor index). The analyses took into account scenarios where the borrowers prepaid their loans at the first possible date and also what happens if no borrower prepays its loan, using rating agency assumptions about replacement liquidity costs. Projections from cfX, the agency's cash flow advisor, indicate that this authorization would strengthen the Housing Bond Resolution under expected cash flow scenarios.

CONCLUSIONS

Following are key conclusions and recommendations.

a. **Core Mission.** Helping finance multi-family housing is a part of MassHousing's core mission. This authorization enables MassHousing to provide lending for 4% tax credit projects despite the continuing inversion of long-term tax-exempt and taxable rates.

b. **Transaction(s) Would Not Otherwise Occur.** The Agency's mission and financial benefits would not be possible without being able to leverage variable rate debt.

c. **Limited and Moderate Risk.** The limited total amount of new variable rate debt is not more than $80 million. Individual transactions would be designed to minimize the amount of such variable rate debt and use as much fixed-rate as possible needed to meet the Housing Bond Resolution investment and spread criteria.

   This overall dollar limitation, the limited existing amount of variable rate debt under the Resolution, the conditions for swaps outlined above, MassHousing's Swap Policy and the requirement for optional par termination of swaps no later than 9 years all significantly reduce risk from this authorization.

d. **Proposal.** This authorization would include multiple transactions expected to be financed through December 31, 2021 within the overall parameters set forth above.

MassHousing COVID-19 Tracking

Mr. Karimbakas gave an update on MassHousing COVID-19 Tracking. In Homeownership, there are 1,650 loans currently delinquent (30 days). Those 1,650 loans are 8.63% of the portfolio. There are 1,270 loans in forbearance (6.63% of the portfolio.) The outstanding principal balance is $271 million and the outstanding advances for taxes and insurance is $2.2 million. The number of loans delinquent or in forbearance has remained steady over the past several months. There have been 118 claims made under the MI Plus program.

Chairman Dirrane asked about the call center and he would like us to analyze our service level adherence pre-COVID vs. today and also how we measure customer satisfaction. Ms. Kornegay responded that she and Mr. Aylouche have analyzed how much more call volume we are getting. The volume is higher and the length of calls is longer and we are assessing how to best staff the call center.

The Homeownership Portfolio is $3.8 billion in unpaid principal balance and a total of 19,129 active mortgages. There has been high payoff activity and loan activity has decreased.

On the Multifamily side there are two developments that are delinquent and none are in forbearance. There is a total of $16.5 million in outstanding multifamily loan balances.

Carolina Avellaneda asked if we have reached out to these developments that are delinquent to assess their status. Ms. Kornegay responded that she, Mark Teden and Mr. Karimbakas meet with the largest developments every 6 weeks and stay in contact.

Mr. Karimbakas added he has been pleasantly surprised that our portfolio has held up so well.

Homeownership Update

Mounzer Aylouche began his presentation by stating Homeownership ended the first quarter of FY21 on a very high note. We made 700 loans to first time homebuyers and 29% of those loans were to borrowers of color. We have started this year off strong due to low interest rates and our Down Payment Assistance Program. We have an equal spread of income levels which reflects the effectiveness of our products.

Mr. Aylouche continued by discussing purchases and payoffs. In September 2020 alone we lost more loans to payoffs than we brought in. This trend has been continuing since March 2020.

Mr. Aylouche went on to discuss forbearances. Since March 2020, 1,787 loans have entered into forbearance and 519 have exited forbearance as of September 2020. Of those 519 loans that have exited forbearance, 29% cancelled the forbearance and stayed current; 16% were reinstated; 42% have had their payments deferred and will repay all at once at the end of the loan; 10% paid in full: 2% have entered a repayment plan and 1% have received a loan modification.

Mr. Aylouche continued by stating we currently have 1,268 loans in forbearance plans which are in 90-day intervals which can be extended. We reach out to borrowers prior to their 90-day extension expiration. We have very few borrowers in their third extension.

Mr. Aylouche continued by discussing the MI Plus program and forbearance. From March 2020 to September 2020, of the 1,787 loans in forbearance, 927 are MI Plus-eligible borrowers. Of that 927 in forbearance, 112 borrowers in forbearance have elected to receive the MI Plus benefit. 408 claims have been paid for a total of $391,035.

Mr. Aylouche went on to state we do not have exact data as to why those eligible for the MI Plus benefit have not chosen to receive the benefit. The staff in the call center are very prepared to discuss the MI Plus benefit with borrowers and there is an online application. Some MI Plus-eligible borrowers have elected the payment deferral option and have opted to save the MI Plus benefit for the future in case they need it. Not all borrowers have lost their jobs, some may have had a partial job loss.

Chairman Dirrane asked about the volume of calls in the call center and asked whether we have the resources to handle all the calls. Mr. Aylouche stated that there are more people answering calls and that some borrowers need a high level of care and those calls need to be answered by the experts in the call center.

Ms. Kornegay added we are getting additional resources to assist with the call volume and may possibly be adding temporary resources.

A discussion ensued regarding call volume in the call center and whether there are education programs to assist borrowers and whether we offer translation services to borrowers.

Mr. Silins joined the meeting at 2:55pm.

MassHousing Annual Meeting

The Members then turned their attention to the Annual Meetings of MassHousing and its affiliates. He referred the Members to the proposed slate of officers. Upon a motion duly made and seconded, by roll call vote of all the Members present, it was

VOTED: That Ping Yin Chai is hereby elected to serve as the Vice-Chair of MassHousing.

FURTHER
VOTED: That Andris J. Silins is hereby elected to serve as the Treasurer of MassHousing.

FURTHER
VOTED: That Chrystal Kornegay, Rachel Madden, Charles C. Karimbakas, and Stephen E. Vickery are hereby elected to serve as Assistant Treasurers of MassHousing.

FURTHER
VOTED: That Colin M. McNiece is hereby elected to serve as the Secretary of MassHousing.

FURTHER
VOTED: That Carol G. McIver is hereby elected to serve as the Assistant Secretary of MassHousing.

Other Post-Employment Benefits ("OPEB") Trust

The OPEB Trust, created by the Agency Members on June 10, 2008, is administered by a trustee constituting a five-member committee called the "MassHousing OPEB Committee". Three of the five slots are designated staff positions (the Chief Operating Officer; the Chief Financial Officer; and the Vice President of Talent and Culture), and the incumbents in those roles serve on an *ex officio* basis. The fourth slot is selected by the Executive Director, and the fifth slot is selected by the Agency Members.

It is recommended that Henry Mukasa, the Agency's Director of Rental Management, continue to serve as the representative of the Agency Members on the MassHousing OPEB Committee until the next Annual Meeting; upon a motion duly made and seconded, by roll call vote of all the Members present, it was

VOTED: That Henry Mukasa serve as the Agency Members' representative to the MassHousing OPEB Committee until the next Annual Meeting.

Massachusetts Housing Finance Agency Employees' Retirement System

Upon a motion duly made and seconded, by roll call vote of all the Members present, with Carolina Avellaneda abstaining, it was

VOTED: That Ping Yin Chai is appointed to serve as a Member of the Massachusetts Housing Finance Agency Employees' Retirement System.

It was noted that Agency Member Andris J. Silins will continue to serve on that Board, consistent with Section 20 of Chapter 32 of Massachusetts General Laws, which provides that the Treasurer of MassHousing serve on the Board of the Massachusetts Housing Finance Agency Employees' Retirement System as an *ex officio* member.

Although a vote was not required, Vicechair Chai reviewed the committee assignments proposed by the Chair for the Members:

Home Ownership Committee

Patricia McArdle, *Chair*
Mark Attia, as designee for Michael Heffernan, ex officio

Loan Committee

Jennifer Maddox, ex officio, or her designee, *Chair*
Lisa Serafin
Jerald Feldman

Management Policy Review Committee

Jennifer Maddox, ex officio, or her designee, *Chair*
Lisa Serafin
Carolina Avellaneda

Investment and Audit Committee

Michael Dirrane, *Chair*
Ping Yin Chai
Mark Attia, as designee for Michael Heffernan, ex officio

Human Resources and Compensation Committee

Michael Dirrane, *Chair*
Ping Yin Chai
Andy Silins
Carolina Avellaneda

Mortgage Insurance Fund Committee

Michael Dirrane, *Chair*
Charles Karimbakas, *ex officio*
Stephen Vickery, *ex officio*
Mounzer Aylouche, *ex officio*
Peter Milewski

Vice Chair Chai then called for a motion to recess MassHousing's Annual Meeting to conduct the annual meetings of MassHousing's affiliates: The Center for Community Recovery Innovations, Inc. ("CCRI") and the Massachusetts Housing Finance Agency Property Acquisition and Disposition Corporation ("PADCO"). Upon a motion duly made and seconded, by roll call vote of all the Members present, it was

VOTED: To recess the MassHousing Annual Meeting and convene the Annual Meeting of PADCO.

Massachusetts Housing Finance Agency Property Acquisition and Disposition Corporation (PADCO) Annual Meeting

Vicechair Chai called the Annual Meeting of the Massachusetts Housing Finance Agency Property Acquisition and Disposition Corporation (PADCO) to order. Mr. Chai referred the Members to the proposed slate of officers. Upon a motion duly made and seconded, by roll call vote of all the Members present, it was

VOTED: That the Board of Directors of PADCO shall consist of the Members of MassHousing.

FURTHER

VOTED: That Michael J. Dirrane is hereby elected to serve as Chairman of PADCO.

FURTHER VOTED: That Chrystal Kornegay is hereby elected to serve as President of PADCO.

FURTHER VOTED: That Henry Mukasa is hereby elected to serve as Vice President of PADCO.

FURTHER VOTED: That Charles C. Karimbakas is hereby elected to serve as Treasurer of PADCO.

FURTHER VOTED: That Colin M. McNiece is hereby elected to serve as Clerk of PADCO.

FURTHER VOTED: That Carol G. McIver is hereby elected to serve as Assistant Clerk of PADCO.

Noting that there was no other business requiring action or discussion, Vice Chair Chai asked if there was a motion to adjourn the PADCO meeting and convene the CCRI meeting. Upon a motion duly made and seconded, by roll call vote of all the Members present, it was

VOTED: To adjourn the Annual Meeting of the Massachusetts Housing Finance Agency Property Acquisition and Disposition Corporation (PADCO) and convene the Annual Meeting of the Center for Community Recovery Innovations, Inc. (CCRI).

Center for Community Recovery Innovations, Inc. (CCRI) Annual Meeting

Vice Chair Chai called the Annual Meeting of CCRI to order. Mr. Chai then referred the Members to the proposed slate of officers. Upon a motion duly made and seconded, by roll call vote of all the Members present, it was

VOTED: That the Board of Directors of the Center for Community Recovery Innovations, Inc. shall consist of the Members of MassHousing, as well as the Chair and Vice-Chair of the Community Services Advisory Committee.

FURTHER
VOTED: That Michael J. Dirrane is hereby elected to serve as Chairman of the Center for Community Recovery Innovations, Inc.

FURTHER
VOTED: That Chrystal Kornegay is hereby elected to serve as President of the Center for Community Recovery Innovations, Inc.

FURTHER
VOTED: That Henry Mukasa is hereby elected to serve as Vice President of the Center for Community Recovery Innovations, Inc.

FURTHER
VOTED: That Charles C. Karimbakas is hereby elected to serve as Treasurer of the Center for Community Recovery Innovations, Inc.

FURTHER
VOTED: That Colin M. McNiece is hereby elected to serve as Clerk of the Center for Community Recovery Innovations, Inc.

FURTHER
VOTED: That Carol G. McIver is hereby elected to serve as Assistant Clerk of the Center for Community Recovery Innovations, Inc.

Noting that there was no other business requiring action or discussion, Vice Chair Chai asked if there was a motion to adjourn the CCRI meeting and reconvene the MassHousing meeting. Upon a motion duly made and seconded, by roll call vote of all the Members present, it was

VOTED: To adjourn the Center for Community Recovery Innovations, Inc. (CCRI) Annual Meeting and reconvene the MassHousing Annual Meeting.

Financing Commitments

Mercantile Wharf, Boston

Kathleen Evans presented a proposal for a Commitment of 13A Protection Grant for Mercantile Wharf in Boston. The development is located in the waterfront neighborhood of Boston, bordered by Atlantic Avenue, Richmond Street, Commercial Avenue, and Cross Street. The historic building faces the Rose Kennedy Greenway, and is within blocks of the Faneuil Hall marketplace, the New England Aquarium, and multiple MBTA stations. Until the 1990s, the building was immediately adjacent to the Central Artery; the so-called Big Dig improved the marketability and desirability of the neighborhood.

The building was constructed in 1857, at a time when Atlantic Avenue was the water's edge, and it was used as a warehouse to support the commercial functions at Quincy Market. In 1970, the building was severely damaged by a devastating fire; six years later the reimagined mixed-use came back online with ground floor commercial and retail space, and 122 residential units. This transformation was brought about with Section 13A financing.

The Section 13A mortgage matured in March 2018, and the development left the MassHousing portfolio at that time. The Sponsor has opted out of the 13A Preservation resources offered by MassHousing and DHCD, and will instead achieve partial preservation with a new project-based Section 8 contract with the payment standard at the Small Area Fair Market Rent ("SAFMR") covering 50 low-income units. The SAFMR are calculated by zip code, rather than across a complete metropolitan area; in the 02110 area code, the SAFMRs are, on average, approximately $1,000 higher than the FMRs typically applied to voucher units.

The remaining ten (10) 13A Legacy households at the development will benefit from mobile MRVP vouchers with the payment standard at the Fair Market Rent ("FMR"). While these tenants will benefit from rental subsidy, the payment standard for those vouchers are insufficient to protect the residents in-place.

As such, the Sponsor has requested a rent reserve that will compensate for the difference between FMR and SAFMR for ten units for a period of ten years. The reserve will be held and administered by MassHousing. In the instance that some portion of the reserve is not used, the reserve will be discharged and the remaining funds will be recovered by MassHousing. Upon a motion duly made and seconded, by roll call vote of all the Members present, it was

VOTED: To approve a grant to Mercantile Wharf Apartments LLC or another entity approved by the Massachusetts Housing Finance Agency (the "Grantee") with respect to the development known as Mercantile Wharf (the "Development") in an amount not to exceed $1,330,000, funded from the portion of the Opportunity Fund approved by the Board on March 8, 2016 designated and reserved for preservation of the Section 13A portfolio, subject to the following special conditions as they may be modified by the Executive Director: (1) affordability for the ten (10) MRVP voucher occupied units shall be preserved for ten (10) years to the satisfaction of the Director of Rental Underwriting; (2) all applicable requirements of Massachusetts General Laws C. 40T shall be met, and (3) subject to such other terms and conditions as required by the Executive Director or her designee; all of the foregoing, to be memorialized with transaction documents in form and substance acceptable to the General Counsel.

FURTHER VOTED: To authorize the Executive Director, Deputy Director, and General Counsel, each acting singly, to execute and deliver on behalf of the Agency such documents and agreements to effectuate the grant described in the preceding votes as the General Counsel shall advise to be necessary and appropriate.

Vice Chair Chai asked if there was any other old or new business for the Members' consideration. There was none.

Vice Chair Chai asked for a motion to adjourn the meeting at 3:17 p.m. Upon a motion duly made and seconded, it was

VOTED: To adjourn the MassHousing meeting at 3:17 p.m.

A true record.

Attest.

____
Colin M. McNiece
Secretary