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e are nearly seven years into recovery from a once-in-a-lifetime financial crisis, triggered by widespread failure across virtually every aspect of our housing finance system.¹ While much work has been done to address the flaws of this critical part of the nation's economy, a major step remains: reforming Fannie Mae and Freddie Mac. These two enormously important yet flawed institutions endure in conservatorship while their regulator, the Federal Housing Finance Agency, admirably helps them tread water while pleading for direction from a paralyzed Congress.²

The situation is not healthy. Lenders and investors alike hold back in the face of the deep uncertainty, leading to a less liquid, less robust and less functional mortgage market. Nor is it sustainable, as the strains of an arrangement that was intended as temporary will likely eventually require the government-sponsored enterprises to turn back to the Treasury for help, making investors and Congress alike increasingly uneasy.

Over and over, efforts to advance reform have foundered, due in part to a range of concerns raised by policymakers and stake-

holders.<sup>3</sup> Here, we offer an approach that attempts to address these concerns, easing the path for reform and, we hope, restarts the conversation about how to move forward. Like any approach, it solves some problems but leaves others that need further work.<sup>4</sup> But we believe that a fresh approach like this is needed to move the conversation forward, because the system can tread water only so long.

## A national highway system for the mortgage market

The principal objective of our proposal is to migrate those components of today's system that work well into a system that is no longer impaired by the components that do not, with as little disruption as possible. To do this, our proposal would merge Fannie and Freddie to form a single government corporation, which would handle all of the operations that those two institutions perform today, providing an explicit federal guarantee on mortgage-backed securities while syndicating all noncatastrophic credit risk into the private market. This would facilitate a deep, broad and competitive primary and secondary mortgage market; limit the taxpayer's risk to where it is absolutely necessary; ensure broad access to the system for borrowers in all communities; and ensure a level playing field for lenders of all sizes.

The government corporation, which here we will call the National Mortgage Reinsurance Corporation, or NMRC<sup>6</sup>, would perform the same functions as do Fannie and Freddie today. The NMRC would purchase conforming single-family and multifamily mortgage loans from originating lenders or aggregators, and issue securities backed by these loans through a single issuing platform that the NMRC

owns and operates. It would guarantee the timely payment of principal and interest on the securities and perform master servicing responsibilities on the underlying loans, including setting and enforcing servicing and loan modification policies and practices. It would ensure access to credit in historically underserved communities through compliance with existing affordable-housing goals and duty-to-serve requirements. And it would provide equal footing to all lenders, large and small, by maintaining a "cash window" for mortgage purchases.

The NMRC would differ from Fannie and Freddie, however, in several important respects. It would be *required* to transfer all non-catastrophic credit risk on the securities that it issues to a broad range of private entities. Its mortgage-backed securities would be backed by the full faith and credit of the U.S. government, for which it would charge an explicit guarantee fee, or g-fee, sufficient to cover any risk that the government takes. And while the NMRC would maintain a modest portfolio with which to manage distressed loans and aggregate single- and multifamily loans for securitization, it cannot use that portfolio for investment purposes. Most importantly, as a government corporation, the NMRC would

be motivated neither by profit nor market share, but by a mandate to balance broad access to credit with the safety and soundness of the mortgage market.

#### A corporation, not an agency

Why a government corporation rather than a government agency or a privately owned mutual or utility? A government corporation can have considerably more flexibility than a government agency. It need not face the same constraints in rule-making or employee compensation, for instance, nor depend on Congress for funding. This flexibility will allow the NMRC to function with more of the flexibility of a private entity, which will be critical in managing an infrastructure as complex and fluid as we have in the housing finance system.

Yet the costs of taking the next step and making the NMRC a privately owned mutual or utility would outweigh the benefits. The pressure to increase profits and market share that drives the typical private company to be more innovative and efficient would be largely absent with the NMRC; it would be a heavily regulated monopoly whose range of business activities, rate of return, and market share would be closely prescribed by policymakers. Whatever marginal flexibility a privately owned institution would have relative to a government corporation would not be worth the significant costs of depending so completely, yet again, on a too-big-to-fail institution, or, in the case of a mutual, the enormous challenges of setting up and operating a company owned by hundreds of institutions of vastly different sizes and interests.

It is also uncertain whether a de novo privately owned institution would be able to raise the considerable capital necessary to fully support the system. Equity investors could be reluctant to commit up front to a system that is untested and deeply entangled with the government. This is not an issue when the NMRC is a government corporation, as the private capital needed will be brought into the system gradually through the credit risk transfer process that FHFA has overseen for the last several years.

#### **FHFA** retains its functions

Under the proposed system, the FHFA would retain the functions it has today, providing broad regulatory oversight over the NMRC

## The advantages of the system

#### Replaces too big to fail with genuine competition

Putting the infrastructure that mortgage market participants depend on into a government corporation accomplishes two key things. First, no private institutions become indispensable to a healthy, functioning secondary market simply by controlling its infrastructure or taking a significant share of the system's credit risk. *No* private institutions will be backstopped by the government, either explicitly or implicitly: None will have an incentive to take on risk that it knows it cannot and will not have to bear. Second, by putting the market's core infrastructure where lenders of all sizes will have

and the Federal Home Loan Bank system and their counterparties. In addition, it would set the g-fee for the catastrophic risk and maintain a mortgage insurance fund, or MIF, funded by those g-fees sufficient to cover the costs of a catastrophic downturn. If the MIF is depleted during a crisis, the FHFA would have the authority to make up any shortfalls in the fund by increasing g-fees to a level greater than that needed to cover the prevailing credit risk when economic conditions normalize. The FHFA's role in the housing finance system would thus be analogous to the FDIC's role in the banking system, similarly protecting taxpayers from any losses accrued from backstopping the system.

We propose having both a government corporation and a regulator, rather than combining them, for several reasons. First is the quite distinct functions involved—managing the core infrastructure of the conforming market and providing its oversight—which lend themselves to different skill sets and internal controls. Second, the division allows a single regulator, the FHFA, to oversee more than one channel of government-backed lending, the NMRC and the FHLB system, and to coordinate policies with the government's other mortgage credit supports like Ginnie Mae, the Federal Housing Administration, the Veterans Administration, and the USDA. Finally, separate entities would allow the FHFA to act as an ombudsman for mediating stakeholder concerns about NMRC's activities. The importance of this role was recently illustrated when mortgage lenders took up their concerns about Fannie and Freddie's representation and warranty policies with the FHFA. It took longer to resolve this dispute than most would have preferred, but the agency was ultimately successful, to the benefit of borrowers and the mortgage market.

The key function of the secondary mortgage market, namely the taking of interest rate and noncatastrophic credit risk, would be handled by the private sector. A large number and broad range of financial institutions would compete to take credit risk. Like the national highway system, in which a wider range of commerce is able to move freely across the country because of the government's stewardship of the infrastructure, here institutions of all sizes and forms will be better able to compete because they have the same access to the basic functions of the conforming mortgage market on which they rely.

equal access, we reduce barriers to entry and thus increase competition in the primary market. Competition among the sources of private capital in the secondary market will also be enhanced by the larger and deeper market for the NMRC's credit risk syndication.

## Broad access for underserved communities and small lenders

The creation of the NMRC will also make it much easier to ensure broad access for underserved communities. Rather than rely on the effectiveness of legislative measures to incentivize private guarantors to

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provide secondary market access for lending in underserved communities, we simply impose the current regime for accomplishing this on the NMRC. The NMRC will be required to meet duty-to-serve and affordability goals defined by the FHFA, the same as Fannie and Freddie must do today. And like the GSEs, to help meet these obligations, the NMRC will price its g-fees in a manner that subsidizes lower wealth borrowers who are creditworthy but may not be able to afford a mortgage loan otherwise. In addition to this subsidy, the NMRC will charge an explicit 10 bps affordability fee that will be used to fund initiatives to support access and affordability for homeownership and rental housing. 10

Community banks and small lenders will also have access to the system in the way they have it today, by using the cash window through the NMRC. Moreover, they will no longer be vulnerable to the historical practice at Fannie and Freddie of providing larger lenders with better pricing given their volume and market power, as this would run directly contrary to the NMRC's mandate to provide broad, competitive access to the secondary market. This mandate would also ensure that the NMRC uses risk syndication practices that maintain a level playing field for all lenders. <sup>11</sup>

#### Lower borrower cost

Mortgage rates in the proposed system would be no higher on average through the business cycle than those in the current system (see Box 1). While the fee for the government's explicit reinsurance is a new cost that would be passed on to the borrower, it would be offset by lower yields on the NMRC mortgage securities. Unlike Fannie and Freddie's MBS, the NMRC's MBS would be explicitly backed by the full faith and credit of the U.S. government, and would thus trade more like Ginnie Mae's explicitly guaranteed MBS, which have historically traded 20 basis points lower in yield than Fannie and Freddie MBS.

While there would be some variation in mortgage rates across borrowers with different credit profiles in the system proposed, as there was in the current system prior to conservatorship and is today, it would be moderated by the need for the NMRC to comply with its duty-toserve and affordable-housing goals, much as it is with Fannie and Freddie today. Rates may be more cyclical than in the current system given the additional reliance on private capital. While Fannie and Freddie's current g-fee rarely changes in response to market conditions, NMRC's g-fee will vary depending on the cost of private capital, which in turn will fluctuate with the perceived risk in the market. G-fees will thus be lower in the new system than in the current system in low-risk environments, when private entities are willing to provide capital more cheaply, and higher in high-risk environments than they would be in the current system, when these entities will require higher returns. The impact on mortgage rates will depend on other factors that will also change with the business cycle, including the yields on MBS and lenders' margins. The cyclicality of g-fees and mortgage rates in the proposed system could also be meaningfully mitigated in a number of ways such as the adoption of countercyclical capital standards, which is described later.

#### Flexibility in a stressed secondary market

Under our proposed system, the NMRC will have the authority and flexibility needed to manage a crisis in the secondary market. In

times of stress, private investors in the risk being syndicated by the NMRC would demand higher returns to justify taking on the higher risk. In a time of acute stress, these investors will either be unwilling to provide capital at all or require such a high return that it would cause guarantee fees and mortgage rates to spike, exacerbating the financial stress. To ensure that this does not happen in the new system, the NMRC would have the flexibility to scale back its risk transfers when private capital's required return rises above a predefined crisis threshold.

To illustrate how this could work, at least at a very high level, suppose the threshold for defining a crisis is when private capital requires an extraordinary return of more than 25%. This is consistent with what investors required in the recent financial crisis, and compares to the roughly 10% return required by investors currently. When this crisis threshold is breached, the NMRC would have the authority to scale back the volume of credit risk it syndicates as it deems appropriate. With this threshold, there would be an effective cap on the g-fee and mortgage rates borrowers face in a crisis, thus serving to mitigate it.

#### Less disruptive transition

Rather than winding the current system down and starting largely from scratch13, we merely accelerate the steps that FHFA already has under way to transfer the GSEs' risk to the private market and synchronize their activities, and then use their merged infrastructure to form the structure for the government corporation that replaces them. Fannie and Freddie would continue to build the common securitization platform; the current effort to synchronize some of the processes at the enterprises would be extended to all of them, from purchasing mortgages to securitizing them and overseeing their servicing; and their current risk-sharing efforts would be expanded so that all of the noncatastrophic risk on their new business would be sold into the market. Importantly, Fannie and Freddie, and ultimately the NMRC, will gradually shift their risk-syndication efforts to the mix of structures that prove most effective in maintaining broad access to affordable credit, a level playing field for lenders of all sizes, and resiliency against market downturns.

Once Fannie and Freddie are issuing a single security off of a single platform, operating under a single set of processes and syndicating all of their noncatastrophic credit risk, their operational assets will be put into the newly formed government corporation, the NMRC. The GSEs' legacy financial assets and liabilities would remain with them and would be steadily wound down; the infrastructure required to manage the wind down and the Treasury's current \$258 billion line of credit to backstop their liabilities would also remain with them until they were extinguished.

#### Only as large as it needs to be

The NMRC will purchase, pool and securitize only those loans that meet the product features of the Consumer Financial Protection Bureau's definition of a "Qualified Mortgage" and have a dollar amount no greater than a limit to be determined by the FHFA.<sup>14</sup>

The system proposed could accommodate either a large or a small government footprint, with the size controlled by adjusting these loan limits. This will allow policymakers to significantly reduce the government's share of the market when purely private lending channels are healthy enough to serve much of the country's borrowers adequately, and scale it up if and when they struggle. While it is important that policymakers do not overuse this flexibility, as that would create unhelpful uncertainty for private-label security inves-

tors and portfolio lenders, having some flexibility will give policymakers comfort to pull the government's share back in normal economic times, knowing that they can expand its share when the private channels dry up. The proposed FHFA regulatory structure also should encourage coordination with the loan limits and priorities of the FHA, VA and USDA to create a more unified federal approach to supporting homeownership and rental housing, even if these entities are not incorporated into the NMRC system as suggested below.

### Potential costs

While our proposed housing finance system offers significant advantages, it does come with two potential costs worth noting.

#### Competition

By putting the purchasing, pooling, master servicing, securitizing and risk syndication functions into a government corporation, we give up some competition across these dimensions. How much is difficult to tell, as regulators would inevitably impose significant limitations on the discretion that they would allow private companies providing these functions, given the benefits of standardization and the importance of managing risk and consumer protection in the system. However, they would no doubt give private institutions at least some discretion, which would lead to differentiation and competition, resulting in a system that is in some respects more nimble and efficient than the one we propose, with more innovation in developing new mortgage products, servicing loans, and sharing credit risk. As we learned in the crisis, not all of that competition and innovation would be beneficial to consumers or the stability of the market, but surely much of it would.

We believe that the system proposed is nonetheless worth this trade-off. This is in part because we believe it is important to solve for the shortcomings in systems in which these functions are in the private sector, but also because the competitive advantages of the system proposed offset at least some of the competitive loss de-

scribed here. By putting the key infrastructure into a government corporation, we level the playing field for lenders of all sizes to compete rather than become beholden to larger institutions that have gained an advantage in times past by taking control over access to the secondary market. Our system also promotes competition in the secondary market across a wider range of sources of private capital, including capital markets, reinsurers, private mortgage insurers, lenders, and other private entities.

#### **Budgetary implications**

It is also important to note that transitioning to this system would move the role of the federal government in backstopping the market onto the federal budget. The impact would be modest, however, since the NMRC will set its g-fee based on returns consistent with those charged by private capital. It would thus be operating consistently with how the Congressional Budget Office evaluates the risk associated with Fannie Mae and Freddie Mac's activities today. The debt issued by NMRC to support its portfolio is unlikely to be added to the Treasury's debt load or count toward the U.S. Treasury's statutory debt limit, but the impact if it did would be inconsequential. The legacy obligations of the GSEs would remain with them as they are wound down in conservatorship, so their accounting should remain unchanged. The legacy obligations of the GSEs would remain with them as they are wound down in conservatorship, so their accounting should remain unchanged.

## Additional concerns

In addition to these two potential costs, we would also expect two concerns with our proposed system to be raised, running, incidentally, in opposite directions: that we are relying too heavily on the government in this new system and that we are relying too heavily on private capital to bear the credit risk.

#### Too much government

As described above, the share of the market that the NMRC would support will be limited to plain vanilla, low-risk loans only up to the size the regulator deems necessary to ensure broad access to credit. In normal times, we would expect lending backed by portfolio lenders and private-label securities investors to serve the majority of the nation's mortgage needs, allowing the government-backed channel to

retreat to a more conservative role. It will only take on a larger role in the market if and as the purely private lending channels dry up.

Moreover, even within the government-backed channel, the government corporation's role will be limited and targeted to increase private capital within that channel. By giving the NMRC the role of gatekeeper to the secondary market within this channel, the system will create more competition in both the primary lending market and the market for credit risk being absorbed in the secondary market. And in bearing the catastrophic credit risk, the NMRC will create greater demand for their mortgage-backed securities, attracting investors who are only interested in taking interest-rate risk. The government's role in the system we propose is thus not only constrained in its share of the market, but also in its presence within

that share, and targeted in a way that maximizes competition and private capital.

#### Too much private capital

On the other hand, the significant volume of credit risk in the market will no doubt give some pause that there is sufficient private capital willing to take on the primary role allotted to it in this system. Of course, unless one proposes having the government take on a larger role in assuming credit risk in the market than we see today,

this is a challenge inherent to *any* proposal to reform the current system. In the system we propose, this challenge is handled by taking on credit risk gradually, allowing the market to develop over time and providing regulators and policymakers time to adjust the course of their risk sharing as it becomes clearer which risk syndication structures are most promising. While we are confident that there is sufficient private capital to take on all of the noncatastrophic credit risk in the system, taking this gradual approach ensures the smoothest possible path to building the broad and deep market needed.

## Possible additions to the base system

One of our primary objectives in offering this proposal is to chart a path for reform with as little transition cost and disruption as possible. That has led us to focus simply on migrating the parts of the current system that have worked well over the years into a new system stripped of the flaws that got the current one into trouble. To further improve upon the new system, however, several additional steps could be taken.

#### Countercyclical capital

To limit the expected cyclicality in mortgage rates in the NMRC system, policymakers should consider the adoption of countercyclical capital standards for both private sources of capital and the MIF. For example, they could be tied to house prices, so that as the market heats up more capital is required and as it cools off, less, thus easing bubbles and accelerating recoveries. Countercyclical capital regimes are already under consideration at the FHFA and consistent with the direction state insurance regulators are headed.<sup>19</sup>

#### Skin in the game

Policymakers should also consider requiring the NMRC to follow current risk-retention rules for private-label MBS and hold onto 5%

## The longer it takes, the riskier it gets

It is all too easy to take false comfort in the current status quo in the mortgage market. Home sales and house prices continue to trend upward in most of the country, and lenders have a market into which to sell their loans. But the housing finance system we have today is unhealthy and unsustainable; mortgage credit remains overly tight, taxpayers remain at risk, and the system lingers in a dysfunctional limbo. If we do not take seriously the need for reform until there is a crisis, we will be forced to undertake a remarkably complex and important effort when we are least equipped to handle it.

of the credit risk that it transfers into the private market. This give the NMRC an added incentive to be careful about the risk that it allows to flow into the secondary market, but, perhaps more importantly, it would provide helpful market feedback, ensuring that the NMRC is not caught off guard when the market is sufficiently distressed as to trigger the deeper catastrophic risk coverage.

#### Integrating government-backed mortgage lending

Finally, the system we have proposed would allow policymakers to better integrate FHA and other mission-oriented government housing finance agencies into the mainstream system. Once the NMRC is established, it could also purchase, pool and securitize loans insured by the FHA, Veterans Administration and USDA as Ginnie Mae does today. For these loans it would be unnecessary to share the credit risk, as those agencies bear the noncatastrophic credit risk already.

Bringing all government-backed lending into a single, coherent system would make it easier for regulators and policymakers to ensure that historically underserved communities are not only being served, but being served as well as everyone else in the mainstream mortgage market.

Our nation deserves a housing finance system that ensures broad access to lenders and borrowers alike, insulates taxpayers behind deep and competitive private capital, and is no longer compromised by the toxic incentives that come with dependence on too-big-to-fail institutions. We offer up this proposal because we believe that it does just that, but also, and perhaps more importantly, to restart the discussion. Let's not wait until the next crisis.

## Box 1: Mortgage rates under different housing finance systems

Mortgage rates under our proposed housing finance system would be no higher on average than current rates, and meaningfully lower than under other proposed systems.

#### **Current system**

In the current system the mortgage rate on a Fannie or Freddie loan equals the sum of the yield required by investors in Fannie and Freddie mortgage-backed securities, the cost of servicing the loan, what lenders charge for originating the loan, and Fannie and Freddie's g-fee. Their g-fee in turn is equal to the sum of their administrative costs, their expected loan losses, the cost of capital they need to hold for unexpected losses, and what they are required to charge borrowers to pay for the 2013 payroll tax holiday.

The rate on a 30-year fixed-rate mortgage loan to a typical borrower in the current system in a well-functioning economy (characterized by full employment, low and stable inflation, and a normalized monetary policy) should be 6.1% (see Table 1).<sup>20</sup> This equals the sum of the 4.9% expected yield on Fannie and Freddie's MBS, the 50-basis point cost of loan origination and servicing, and the 70-basis point g-fee.

Fannie and Freddie's MBS yield is in turn equal to the 4% Treasury yield, plus the 90-basis point typical spread on Fannie and Freddie MBS over Treasuries. This yield spread compensates investors for prepayment risk, and the risk that the GSEs are unable to make good on their guarantee for credit risk. Even though Fannie and Freddie are operating under government conservatorship, investors are still unsure of the government's commitment to fully backstop their MBS and thus require a higher yield to compensate. Fannie and Freddie's 70-basis point g-fee is largely composed of the cost of capital the GSEs implicitly hold for unexpected losses.<sup>21</sup>

#### **NMRC** system

The private market in the NMRC system provides capital covering the first 3.5% of losses, and the after-tax return on this capital is 10%. The sources of private capital in the NMRC system are not too big to fail, and thus will not be required to hold additional capital to remain going concerns in a crisis, as would be required of a systemically important financial institution.

The NMRC will provide the going-concern capital needed in a crisis through the MIF. The MIF will be equal to 2.5% of the total insurance-in-force, and funded by a catastrophic reinsurance fee of 10 basis points.<sup>22</sup> When combined with the 3.5% capitalization rate for the private capital, this would bring the system's total capi-

talization to 6%, which is approximately double the realized losses experienced by Fannie and Freddie as a result of the crisis.

The fee charged in the NMRC system to fund the subsidy to ensure that the affordable-housing goals and duty-to-serve requirements are met is also assumed to be 10 basis points.<sup>23</sup> Offsetting these added costs is the lower yield expected on NMRC MBS. Given the government's full backing of the securities, they would have yields similar to Ginnie MBS, which are approximately 20 basis points lower than Fannie and Freddie MBS.

While mortgage rates in the NMRC system would be similar to the current system on average through the business cycle, they may also be more cyclical, depending on changes in g-fees, yields on MBS and lenders' margins. They would be capped, however, so that in a crisis they would not rise so high that the housing market would be undermined, further weakening the economy and exacerbating the crisis. To illustrate, consider that a crisis is defined to occur when private sources of capital require a 25% return of equity. In this case, the maximum increase in g-fees charged by NMRC and private capital together in a crisis would be an estimated 53 basis points, or about 33 basis points higher than what we have in today's market after accounting for the 20-basis point benefit of the explicit government backstop on NMRC's MBS.<sup>24</sup>

#### Other housing finance systems

Mortgage rates would be higher in the other significant housing finance proposals than in the NMRC system. This includes the system envisaged under the Senate legislation sponsored by Senators Johnson and Crapo in 2014 (Johnson-Crapo), the system that would be created through the recapitalization and privatization of Fannie and Freddie (Recap and Release), and the fully privatized system envisaged under the so-called PATH Act introduced by Republicans in the House Financial Services Committee in 2014.

This is our conclusion even under the most favorable assumptions regarding how these other proposals would ultimately be implemented. Rates would be higher under Johnson-Crapo given the likelihood that the private guarantors at the center of that system would be deemed too big to fail and thus required to hold much more capital, a cost that would be passed on to mortgage borrowers.<sup>25</sup> This would also be a problem under Recap and Release, as Fannie and Freddie would certainly be deemed too big to fail.<sup>26</sup> And rates would go up most dramatically under the PATH Act, because of the significant capital required for private institutions to bear the entirety of the credit risk in the absence of a government backstop.<sup>27</sup>

Table 1: Comparing Mortgage Rates Under Different Housing Finance Systems

	Current system	tem	NMRC		Johnson-Crapo	rapo	Recap and Release	elease	PATH Act	ct
Mortgage rate		6.10%		6.10%		6.26%		6.55%		7.16%
Difference with current system				0.00%		0.17%		0.46%		1.06%
Mortgage-backed securities yield		4.90%		4.70%		4.70%		4.90%		5.30%
Spread on mortgage securities		90 bps		70 bps		70 bps		90 bps		130 bps
Treasury rate (duration matched)		400 bps		400 bps		400 bps		400 bps		400 bps
Servicing and origination compensation		50 bps		50 bps		50 bps		50 bps		50 bps
Guarantee fee		70 bps		90 bps		106 bps		115 bps		136 bps
Expected credit losses		4 bps		4 bps		4 bps		4 bps		4 bps
Administrative costs		7 bps		7 bps		7 bps		7 bps		7 bps
Govt catastrophic reinsurance fee		0 bps		10 bps		10 bps		0 bps		0 bps
Affordability fee		0 bps		10 bps		10 bps		10 bps		0 bps
Payroll tax surcharge		10 bps		10 bps		10 bps		10 bps		10 bps
Dividend on Treasury capital		0 bps		0 bps		0 bps		0 bps		0 bps
	Capitalization	Cost of capital	Capitalization	Cost of capital	Capitalization	Cost of capital	Capitalization	Cost of capital	Capitalization	Cost of capital
Total capitalization and cost of capital	3.5%	49 bps	3.5%	49 bps	10.0%	65 bps	10.0%	84 bps	5.0%	115 bps
Common equity	3.5%	56 bps	3.5%	56 bps	3.5%	56 bps	5.0%	79 bps	5.0%	125 bps
Preferred equity	%0.0	0 bps	0.0%	0 bps	1.0%	11 bps	0.0%	0 bps	%0.0	0 bps
Subordinated debt	%0.0	0 bps	%0.0	0 bps	2.5%	8 bps	%0.0	0 bps	%0.0	0 bps
Government credit line	%0.0	0 bps	%0.0	0 bps	%0.0	0 bps	2.0%	15 bps	%0.0	0 bps
Present value of future g-fees	0.0%	0 bps	0.0%	0 bps	3.0%	0 bps	0.0%	0 bps	%0.0	0 bps
Less: Return on cash reserves to pay for losses		-7 bps		-7 bps		sdq 6-		-10 bps		-10 bps
Assumptions:										
Before-tax cost of common equity		16%		16%		16%		16%		25%
After-tax cost of common equity		10%		10%		10%		10%		16%
After-tax cost of preferred equity		7%		7%		7%		7%		7%
Cost of subordinated debt (bps spread over Treasury)		300		300		300		300		300
Cost of government credit line (bps)		0		0				300		
Pre-tax return on unlevered capital		2%		2%		2%		2%		2%
Treasury draw (\$ bil)		187		187		187		187		187
Tax rate		37%		37%		37%		37%		37%

Note: This analysis is for 30-year fixed-rate mortgage borrowers with loan-to-value ratios and credit scores consistent with the current distribution of Fannie Mae and Freddie Mac loans. It also assumes that the economy is in equilibrium, meaning that it is at full employment and inflation is consistent with the Federal Reserve's 2% target.

Source: Moody's Analytics

#### **Endnotes**

- 1 For a useful discussion of the wide range of issues that led to the collapse of the housing finance sector, see the "Financial Crisis Inquiry Report: Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States," January 2011.
- 2 FHFA Director Melvin L. Watt's most explicit call on Congress to act came in a recent speech at the Bipartisan Policy Center, found here.
- 3 The bill passed out of the Senate Banking Committee in 2014 sponsored by Chairman Johnson (D-SD) and Ranking Member Crapo (R- ID) was the most promising legislative attempt to date to design a system to provide broad access to credit at manageable risk to the taxpayer. An analysis of the legislation is provided in Housing Finance Reform Steps Forward, Mark Zandi and Cristian deRitis, Moody's Analytics whitepaper, March 2014.
- 4 There are quite a few issues that we have not addressed here that would need to be in converting this general model into legislation: the details of the charter creating the NMRC, how to address Fannie and Freddie's shareholders, and details on how this model would function in the multifamily market, to name but a few.
- 5 We refer to catastrophic credit risk throughout the paper to mean credit losses comparable to those experienced during the recent housing crash and Great Recession.
- 6 The authors apologize for adding yet another indecipherable abbreviation to the GSE discussion and hope that policymakers can come up with something more memorable.
- 7 The applicability of statutes regarding rule-making, employee compensation and so forth would be set out in its congressional charter. For an explanation of government corporations generally see "Federal Government Corporations: An Overview," Kevin R. Kosar, Congressional Research Service, July 2011.
- 8 One area where this flexibility will be important is employee compensation. While there is no limitation on compensation in government corporations per se, in developing the NMRC's charter Congress will face pressure to limit the pay in the institution. While pay at taxpayer-backed institution should indeed be kept in check, it will be extremely important to give the NMRC the flexibility to attract and retain a level of talent and experience sufficient to handle the considerable responsibility here.
- 9 This is analogous to what the FHA has been doing in recent years by charging historically high insurance premiums in order to rebuild the Mutual Mortgage Insurance Fund.
- 10 We assume that the funds generated will be allocated to the Housing Trust Fund, the Capital Magnet Fund and initiatives to support innovations to expand access to credit in harder to serve populations.
- 11 It is worth noting that the authors take no position, ex ante, about what mix of risk sharing structures the NMRC should use. It will be up to the FHFA, the GSEs and ultimately the NMRC to determine what mix best serves borrowers, maintains a level playing field for lenders of all sizes and maintains stable liquidity through the business cycle.
- 12 A 25% return on equity is also consistent with the return required by unsecured consumer lenders such as credit card lenders. Note that fleshing this concept out would take some work: Policymakers would need to develop a mechanism for determining when the ROE threshold has been reached, a way to discern regional stresses from national ones, and so forth.
- 13 One of the most compelling concerns with the legislative proposals offered thus far has been the significant but uncertain cost of transition. For a sense of this concern, see "Millstein: Here's How to Revamp Fannie, Freddie," in the Wall Street Journal, October 22, 2012.
- 14 For a summary of the product features that would not be allowed to run through the NMRC (interest only loans, negatively amortizing loans, and loans with balloon payments), see "What is a Qualified Mortgage," by the Consumer Financial Protection Bureau, updated February 8, 2016.
- 15 While there is an argument for setting the size of the loan limits in statute to insulate the decision-making from political pressure, we believe that it is better to leave it to the discretion of the regulator, perhaps with explicit guidance regarding the conditions under which they should raise or lower it.
- 16 This is not an endorsement of the use of fair value accounting rules for the government's credit-related activities, but simply to say that our proposal is consistent with the way the CBO evaluates the GSEs today.
- 17 Whether NMRC debt is counted toward the Treasury's debt load or debt limit depends on the NMRC's charter. If the charter explicitly states that the NMRC debt securities are guaranteed by the U.S. government, then the securities would count against the debt limit. However, if the NMRC charter act is silent and the marketing of the NMRC securities instead relies on the decades-long line of Attorney General and DOJ Office of Legal Counsel published opinions that state that all obligations of all federal agencies (including government corporations) are equally backed by the full faith and credit of the United States, unless explicitly disclaimed in the respective charter act (as Congress did in the case of the TVA and USPS charter acts), then the NMRC securities would not count against the statutory debt limit.
- 18 Most importantly, the GSEs' current obligations would not be counted towards the Treasury's debt or debt limit.
- 19 The FHFA's work on countercyclical capital is described in "Countercyclical Capital Regime: A Proposed Design and Empirical Evaluation," Scott Smith and Jesse Weiher, FHFA working paper, April 2012. The National Association of Insurance Commissioners has established a working group to develop new capital standards for private mortgage insurers that will include countercyclical standards.
- 20 The current mortgage rate is much lower, at below 4%, since the economy has yet to achieve full employment, inflation is below target, and monetary policy remains far from normal. All of which is keeping Treasury yields and thus yields on Fannie and Freddie's MBS atypically low.
- 21 See "A General Theory of G-Fees," Mark Zandi and Cristian deRitis, Moody's Analytics White Paper, October 2014 for a more detailed explanation of this analysis.
- 22 The 10 basis point fee to fund the MIF is the same as in the Johnson-Crapo legislation. Many cost is based on a number of assumptions, including the assumption that it will be based on Fair Credit Reporting Act accounting.
- 23 There will be some costs associated with the operation of the NMRC, but they are assumed to be offset by the lower costs associated through the merger of Fannie and Freddie's operations.
- 24 This is equal to the product of the 15-percentage point increase in private capital's required rate of return (25% crisis threshold ROE minus 10% current ROE) and the system's 3.5% private capitalization.

- 25 An analysis of the Johnson-Crapo legislation is provided in "Housing Finance Reform Steps Forward," Mark Zandi and Cristian deRitis, Moody's Analytics white paper, May 2014.
- 26 For more on how re-privatizing Fannie and Freddie would increase mortgage rates, see "Privatizing Fannie and Freddie: Be Careful What You Ask For," Jim Parrott and Mark Zandi, May 2015.
- 27 For more on how the PATH Act would impact mortgage rates see "Evaluating PATH," Mark Zandi and Cristian deRitis, Moody's Analytics White Paper, July 2013.

#### **About the Authors**

Jim Parrott is a senior fellow at the Urban Institute and owner of Falling Creek Advisors, which provides financial institutions with strategic advice on housing finance issues. Jim spent several years in the White House as a senior advisor on the National Economic Council, where he led the team of advisors charged with counseling the cabinet and president on housing issues. He was on point for developing the administration's major housing policy positions; articulating and defending those positions with Congress, the press and public; and counseling White House leadership on related communications and legislative strategy. Prior to his time with the NEC, Jim was counsel to Secretary Shaun Donovan at the Department of Housing and Urban Development. He has a JD from Columbia University School of Law, an MA from the University of Washington, and a BA from the University of North Carolina.

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