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# Next Steps in the Housing Finance Reform Saga

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Momentum seemed to be escalating in early 2014 for the passage of a comprehensive reform package of the housing finance system in the U.S., but that was not to be, as neither political party fully supported its passage, derailing the progress made over the previous few years.

While consensus around the primary features of reform has grown, new research that questions these assumptions needs to be addressed and the inertia keeping the country mired in the current, uncertain system needs to be overcome. In this brief, we will discuss the progress made thus far en route to reform, analyze the disparate elements of the leading proposals, and incorporate new findings that will shape the additional research that must be done before policymakers can agree on the best path forward.

## THE CURRENT SYSTEM

The Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac)—both known as government sponsored enterprises (GSEs)—are the vehicles in the United States for creating a secondary market for residential mortgages and for providing liquidity to that market. They purchase conforming mortgages from lenders—primarily single-family, 30-year fixed rate mortgages that have not been insured by the federal

## SUMMARY

- The U.S. government's open-ended assistance in the housing industry is not a feasible long-term strategy for economic growth, and ending the current conservatorship of Fannie Mae and Freddie Mac is fundamental to any housing finance reform measure.
- Several points of consensus for reform have emerged, including: preserving the 30-year fixed rate mortgage and the market for mortgage-backed securities (MBS); ordering private capital in a first-loss position with a government guarantee to protect only against catastrophic outcomes; creating a common securitization platform (CSP) to provide transparency and liquidity; and providing for affordable housing directives.
- New research from the Federal Reserve, which proposes that a catastrophic risk insurance premium be added on top of the other new costs of reform, also demands consideration.
- This brief breaks down several leading reform proposals and contains an in-depth analysis of the Johnson-Crapo Housing Finance Reform and Taxpayer Protection Act of 2014 and its possible effects on mortgage rates.



government—in order to allow lenders to make more loans to borrowers. They then maintain these purchased loans in their own portfolios or, more often than not, package them into mortgage-backed securities (MBS) which they sell to investors. The fees charged to investors for guaranteeing payment on the MBS are a major source of income for Fannie and Freddie.<sup>1</sup> Prior to 2008, both GSEs were private companies that had these same responsibilities, although Congress created them at different times. But as a consequence of the financial crisis, Fannie and Freddie were placed under the conservatorship of the Federal Housing Finance Agency (FHFA) on September 7, 2008. Under the regulation of the FHFA, they collectively received \$180 billion in assistance, which they subsequently repaid in full, and they have gone on to earn profits in recent years. Despite these facts, they remain in conservatorship and the system of insuring mortgages in the U.S. continues to rely on the open-ended assistance of the federal government.

## **POINTS OF CONSENSUS FOR SECURITIZATION REFORM IN EARLY 2015**

After much economic and legislative debate in Congress, a number of key requirements have emerged that likely will be present in any reform proposal which moves the country away from the current system. The first requirement is the acknowledgment that the 30-year fixed rate mortgage is still the principal mortgage product in the United States. Historically, most banks have swapped the mortgages they originated for GSE mortgage-backed securities into the secondary market to decrease their risk exposure. The preservation of the TBA (To-Be-Announced) Market for MBS is necessary to support the liquidity of this market and to help ensure the continued existence of the 30-year fixed rate mortgage.<sup>2</sup>

The second requirement appearing as a point of consensus is that private capital should be located in a first-loss position to absorb downturns in the MBS market, with the government providing a guarantee behind that first-loss position to insure only against catastrophic outcomes. A Federal Deposit Insurance Corporation (FDIC)-like fund supported by guar-

antee fees (g-fees) could provide this catastrophic government guarantee. Up front private capital could shield taxpayers from having to pay for bailouts in the event of another financial crisis, but disagreements abound as to the level and the make-up of private capital necessary in this first-loss position. We will analyze the consequences of differing estimates below.

Third, a common securitization platform (CSP) is the best way of ensuring transparency and liquidity and maintaining oversight of credit standards in the MBS market. There is continuing debate as to whether there should be one security or more, especially given the likely continuance of the GNMA security which insures the timely payment of pools of 100% government-guaranteed FHA/VA mortgages. In any case, this utility would set loan origination, servicing, pooling, and securitization standards.

Last, affordable housing should, in some way, be addressed in any reform. An important choice is whether affordable housing will become the primary responsibility of the FHA, or whether affordable housing mandates should also be imposed on any system designed to replace Fannie Mae and Freddie Mac.<sup>3</sup> Failing to add affordable housing directives will exacerbate

## **NOTES**

<sup>1</sup> Currently, guarantee fees roughly equal portfolio income in Fannie Mae's single family market and account for about 80% of portfolio income in its multifamily market. Guarantee fees are an even larger income source for Freddie Mac. See: [http://www.fanniemae.com/resources/file/ir/pdf/quarterly-annual-results/2014/10k\\_2014.pdf](http://www.fanniemae.com/resources/file/ir/pdf/quarterly-annual-results/2014/10k_2014.pdf) and [http://www.freddiemac.com/investors/er/pdf/10k\\_021915.pdf](http://www.freddiemac.com/investors/er/pdf/10k_021915.pdf).

<sup>2</sup> For a further discussion on the TBA Market, see Akash Kanojia and Meghan Grant. "Preserving the TBA Market." Forthcoming.

<sup>3</sup> For a further discussion on FHA, see Kevin A. Park and Roberto G. Quercia's "The Once and Future Federal Housing Administration." Forthcoming.

<sup>4</sup> Diana Hancock, and Wayne Passmore. Board of Governors of the Federal Reserve System, "Macroprudential Mortgage-Backed Securitization: Can it Work?" Forthcoming.

<sup>5</sup> Delaney, Carney, and Himes Introduce Housing Finance Reform Legislation. <http://delaney.house.gov/news/press-releases/delaney-carney-and-himes-introduce-housing-finance-reform-legislation>

<sup>6</sup> Patricia C. Mosser, Joseph Tracy, and Joshua Wright. Federal Reserve Bank of New York, "The Capital and Governance of a Mortgage Securitization Utility." January 2015.

<sup>7</sup> Mark Zandi and Christian deRitis. Moody's Analytics, "Housing Finance Reform Steps Forward." April 2014.

<sup>8</sup> Fannie Mae, "Summary of Issues, Johnson-Crapo Discussion." April 2014.

<sup>9</sup> Freddie Mac, "Analysis of Johnson-Crapo Discussion." March 2014.



risk-based pricing and lead to less cross-subsidization which, in turn, may make loans prohibitively expensive to people in underserved communities and may lead to procyclicality in these markets and in the overall housing finance market, as discussed below.

This is the current state of the dialogue surrounding reform, but new findings from researchers at the Federal Reserve indicate that these requirements alone may not be enough to stave off future bailouts of failing financial institutions. They suggest that all mortgages, whether securitized privately or through a GSE-like program, should be insured against catastrophic risk.<sup>4</sup>

## EXISTING PROPOSALS

The aforementioned points of consensus that developed over the last several years stem from various proposals offered in Congress. The option we will consider in depth is the Johnson-Crapo Housing Finance Reform and Taxpayer Protection Act of 2014, and we will compare this to two other options: a cooperative, as suggested by NY Federal Reserve Bank researchers, and a reformed, privatized Fannie and Freddie system, as suggested by vari-

ous groups of existing shareholders of the remaining outstanding common and preferred stock of those companies. We also will consider the implications of the recent Federal Reserve research on catastrophic risk insurance in the housing finance system.

It does warrant mentioning, however, that other significant proposals exist. The first is the Protecting American Taxpayers and Homeowners (PATH) Act, which the House Committee on Financial Services approved in 2013 and calls for phasing out the GSEs, marginalizing the role of the Federal Housing Administration (FHA), and establishing a non-profit National Mortgage Market Utility. This Utility would not be able to guarantee mortgages, but would set loan origination, servicing, pooling, and securitization standards. The second proposal is the Partnership to Strengthen Homeownership Act, introduced in the House in July 2014 by Representatives John K. Delaney (D-MD), John Carney (D-DE), and Jim Himes (D-CT). This bill would replace the GSEs with an insurance program established through Ginnie Mae. It calls for a 5% private capital shield in a first-loss position and stipulates that the remaining 95% of the risk be shared between Gin-

nie Mae and a private reinsurer on a *pari passu* basis.<sup>5</sup> In this proposal, the government guarantee is fully priced in the market and there is no effective backstop. Even though in theory this model should provide market discipline, mortgage guarantors can go out of business. It therefore raises the question of whether lending will remain robust in times of market stress.<sup>6</sup>

## THE JOHNSON-CRAPO OPTION

Bipartisan legislation introduced by Senators Tim Johnson (D-SD) and Mike Crapo (R-ID) built upon previous legislation offered by Senators Bob Corker (R-TN) and Mark Warner (D-VA) and attempted to coalesce each reform requirement under a single bill. Johnson-Crapo creates the FDIC-like Federal Mortgage Insurance Corporation (FMIC) that would serve as the regulator responsible for oversight of the mortgage insuring, securitizing, and servicing processes. The FMIC would provide an explicit government backstop for eligible MBS, thus codifying the implicit guarantee historically provided by Fannie and Freddie, both of which would be phased out under this

## NOTES

- <sup>10</sup> Akash Kanojia and Meghan Grant. "Preserving the TBA Market." Forthcoming.
- <sup>11</sup> For a further discussion on the difficulties of correctly pricing risk for mortgage securities, see Levitin, Adam J., and Susan M. Wachter. "Explaining the Housing Bubble." *Georgetown Law Journal* 100.4 (2012): 1177-1258. <http://ssrn.com/abstract=1669401>
- <sup>12</sup> For a further discussion on how the lack of availability in the mortgage market causes economic and regulatory problems, see Levitin, Adam J., and Susan M. Wachter.

- "Second-Liens and the Leverage Option." U of Penn, Inst for Law & Econ Research Paper Forthcoming (2015). <http://ssrn.com/abstract=2556687>
- <sup>13</sup> Mark Zandi and Christian deRitis. Moody's Analytics, "Housing Finance Reform Steps Forward." April 2014.
- <sup>14</sup> Fannie Mae, "Summary of Issues, Johnson-Crapo Discussion." April 2014.
- <sup>15</sup> Congressional Budget Office, "Cost Estimate: S. 1217 Housing Finance Reform and Taxpayer Protection Act of 2014." May 2014. <https://www.cbo.gov/sites/default/files/>

s1217\_0.pdf

- <sup>16</sup> Laurie Goodman, Jim Parrott, and Ellen Seidman. Urban Institute, "A Johnson-Crapo Dialogue." July 2014.
- <sup>17</sup> Diana Hancock and Wayne Passmore. Board of Governors of the Federal Reserve System, "Macroprudential Mortgage-Backed Securitization: Can it Work?" Forthcoming.
- <sup>18</sup> Patricia C. Mosser, Joseph Tracy, and Joshua Wright. Federal Reserve Bank of New York, "The Capital and Governance of a Mortgage Securitization Utility." January 2015.
- <sup>19</sup> Clifford V. Rossi. Chesapeake Risk Advisors, LLC, "Forging

legislation and replaced by similarly funded aggregators. It would further create and regulate a new CSP focused on preserving the 30-year fixed rate mortgage.<sup>7</sup>

The Johnson-Crapo bill mandates a 10% private capital shield in a first-loss position in order for financial institutions to qualify for the government guarantee, but predictions of the bill's overall effects on mortgage rates vary widely depending on who is doing the estimating. The FHFA required Fannie and Freddie to provide estimates on how Johnson-Crapo would affect mortgage rates, which we analyze in Table 1.<sup>8, 9</sup> We also consider estimates put forth by Mark Zandi and Christian deRitis of Moody's Analytics. Each of the three organizations presents different scenarios, which we group together by how they allocate the cost of guarantors' capital. How policymakers decide which forms of capital will make up the 10% buffer remains an open question, but the categories in Table 1 (Rigid vs. Flexible Capital Structures) illustrate that defining these features of the bill can lead to large disparities in the cost of capital and, ultimately, in mortgage rates. Comparing the three estimates of the Rigid Capital Structure is difficult because each

**TABLE 1: ASSUMED MORTGAGE RATES UNDER JOHNSON-CRAPO**

April 2014 (no. in basis points)

| <b>Rigid Capital Structure</b>                       | $\alpha$ | <b>Moody's</b> | $\beta$    | <b>Fannie Mae</b> | $\gamma$ | <b>Freddie Mac</b> |
|--|----------|----------------|------------|-------------------|----------|--------------------|
| Guarantee fee  |          | 128            |            | 146               |          | 205                |
| Cost of capital (10% private in first-loss position) |          | 86             |            | 116               |          | 160                |
| Common equity  | 4%       | 76             | 5%         | 77                | 7%       | 148                |
| Preferred equity                                     | 0%       | 0              | 5%         | 39                | 7%       | 0                  |
| Debt or risk syndication                             | 6%       | 18             | 0%         | 0                 | 3%       | 12                 |
| Present value of future guarantee fees               | 0%       | 0              | 0%         | 0                 | 0%       | 0                  |
| Less: Return on cash reserves to pay for losses      |          | -8             |            | -                 |          | -                  |
| Administrative costs                                 |          | 10             |            | 10                |          | 9                  |
| Expected losses                                      |          | 10             |            | 5                 |          | 8                  |
| Mortgage Insurance Fund                              |          | 10             |            | 5                 |          | 15                 |
| Market Access Fund                                   |          | 10             |            | 10                |          | 13                 |
| Yield on Mortgage Securities                         |          | 335            |            | 330               |          | 335                |
| Servicing and Origination Compensation               |          | 50             |            | 50                |          | 50                 |
| <b>Assumed Mortgage Rate</b>                         |          | <b>511</b>     |            | <b>526</b>        |          | <b>590</b>         |
| <b>Flexible Capital Structure</b>                    | $\delta$ | <b>Moody's</b> | $\epsilon$ | <b>Fannie Mae</b> | $\zeta$  | <b>Freddie Mac</b> |
| Guarantee fee  |          | 109            |            | 100               |          | 83                 |
| Cost of capital (10% private in first-loss position) |          | 69             |            | 70                |          | 62                 |
| Common equity  | 3%       | 57             | 3%         | 46                | 4%       | 50                 |
| Preferred equity                                     | 1%       | 11             | 3%         | 23                | 1%       | 6                  |
| Debt or risk syndication                             | 3%       | 9              | 0%         | 0                 | 4%       | 6                  |
| Present value of future guarantee fees               | 3%       | 0              | 4%         | 0                 | 1%       | 0                  |
| Less: Return on cash reserves to pay for losses      |          | -8             |            | -                 |          | -                  |
| Administrative costs                                 |          | 10             |            | 10                |          | 6                  |
| Expected losses                                      |          | 10             |            | 5                 |          | 3                  |
| Mortgage Insurance Fund                              |          | 10             |            | 5                 |          | 5                  |
| Market Access Fund                                   |          | 10             |            | 10                |          | 7                  |
| Yield on Mortgage Securities                         |          | 335            |            | 350               |          | 325                |
| Servicing and Origination Compensation               |          | 50             |            | 50                |          | 50                 |
| <b>Assumed Mortgage Rate</b>                         |          | <b>494</b>     |            | <b>480</b>        |          | <b>458</b>         |

$\alpha$  = Moody's "Strict Interpretation"  
 $\beta$  = Fannie Mae's "Model Fee with Preferred Equity"  
 $\gamma$  = Freddie Mac's "High Cost Scenario"

$\delta$  = Moody's "Liberal Interpretation"  
 $\epsilon$  = Fannie Mae's "Model Fee with Future Fees + Preferred Equity"  
 $\zeta$  = Freddie Mac's "Low Cost Scenario"

**NOTES**

a Path out of Conservatorship for Fannie Mae and Freddie Mac." October 2014.

<sup>20</sup> This path would also include the use of credit risk transfer securities, such as Fannie Mae's Connecticut Avenue Securities and Freddie Mac's STACR debt. For more information, see Treasury official Michael Stegman's remarks. <http://www.treasury.gov/press-center/press-releases/Pages/jl9987.aspx>

<sup>21</sup> For a further discussion on credit in the housing market, see Wachter, Susan M., "Credit Supply and Housing Prices

in National and Local Markets." (2014). <http://ssrn.com/abstract=2508029>

<sup>22</sup> Laurie Goodman, Jim Parrott, and Ellen Seidman. Urban Institute, "A Johnson-Crapo Dialogue." July 2014.

<sup>23</sup> Another difference between the reform options so far discussed is that there would be less vertical integration in the revamped Fannie and Freddie system as they would continue not originating loans. A potential shortcoming that poses a "Too Big to Fail" risk under Johnson-Crapo is that the bill allows for financial institutions to be both

guarantors and originators, though momentum has pushed policymakers away from this idea. See: Mark Zandi, and Christian deRitis. Moody's Analytics, "Housing Finance Reform Steps Forward." April 2014.

<sup>24</sup> Diana Hancock and Wayne Passmore. Board of Governors of the Federal Reserve System, "Macroprudential Mortgage-Backed Securitization: Can it Work?" Forthcoming.

<sup>25</sup> For a further discussion, see Wachter, Susan. "The Market Structure of Securitization and the US housing bubble." National Institute Economic Review 230.1 (2014): R34-



organization presents very different capital breakdowns. What they have in common, however, is that each allows the use of only two distinct forms of capital (i.e., specific equity and debt instruments) and none allow for the inclusion of the present value of future g-fees to count towards the 10% threshold. The Flexible Capital Structure does allow for the inclusion of future g-fees and has no restrictions on how the 10% is composed.

Another open question is the 10% level itself. Both Moody's and the Urban Institute's analyses find that a 4-5% private capital buffer would have been sufficient for Fannie and Freddie to withstand the crisis begun in 2007 (note: the actual level the GSEs maintained both at that time and now is closer to 1%). They each question the need for such a high level of private capital in a first-loss position because they assume a high quality book of business with underlying mortgages meeting basic qualified mortgage standards, which is already a requirement under Johnson-Crapo. Furthermore, the GSEs and Ginnie Mae currently impose strict guidelines on which mortgages are eligible for securitization.<sup>10</sup> Recent analysis from Diana Hancock and Wayne Passmore of the Federal Reserve suggests

that private capitalization of more than 15% may be required to avoid a future government intervention, but the depth of the need for capital and the cyclical depends in the end on underwriting over the cycle, and the sheer lack of availability of information about potential mortgage losses accounts for the uncertainty surrounding these estimates.<sup>11, 12</sup>

Other factors that lead to conflicting estimates of mortgage rates under Johnson-Crapo are different return assumptions and varying estimations of the cost of the Market Access Fund. The Market Access Fund noted in Table 1 is shorthand, referring to both a newly created fund of the same name that would be charged with overseeing the creation of responsible lending products for underserved communities, as well as a new Housing Trust Fund that would be required to ensure the availability of quality housing.<sup>13</sup> These funds are merely incentives to provide access for housing and are a departure from the current system whereby the two GSEs have specific affordable housing goals.

### **IMPLICATIONS OF MORTGAGE RATE ESTIMATES**

According to Fannie Mae, whose

guarantee fee was 47 basis points (bp) in April 2014 (i.e., the same timeframe as Table 1), the average mortgage rate was 447bp.<sup>14</sup> Therefore, under Johnson-Crapo, mortgage rates could rise by anywhere from 64 to 143bp, or 14-32%, under the Rigid Capital Structure. Moody's simulated a 50bp increase in fixed mortgage rates and, after three years (beginning retroactively in January 2014), it determined that the homeownership rate would be about 0.1% lower, with annual home sales lower by approximately 250,000 units and housing starts down by over 100,000 units. Further analysis appears warranted, given a potential rise in fixed mortgage rates of about three times the size simulated by Moody's. What effect would this have on homebuyers, especially first-time buyers, and on the economy as a whole, if higher rates lead to fewer sales and decreased homeownership?

Another unknown is the effect Johnson-Crapo would have on the federal budget. Static projections from the CBO estimate that enacting Johnson-Crapo would decrease federal deficits by \$58 billion over the 2015-2024 decade.<sup>15</sup> The CBO predicts a \$60 billion drop in direct spending, as new FMIC fees would exceed the

#### **NOTES**

R44. <http://ssrn.com/abstract=2508030>

<sup>26</sup> Clifford V. Rossi. Chesapeake Risk Advisors, LLC, "Forging a Path out of Conservatorship for Fannie Mae and Freddie Mac." October 2014.



cost of guarantees, and revenue would drop slightly since the FHFA would no longer assess GSE fees. But there is also an equity component that the CBO fails to account for. A move away from the current system likely would decrease the federal government's equity ownership in and income from the GSEs. Additionally, such a shift in the housing finance landscape could alter the behavior of mortgage issuers in less straightforward ways. Therefore, budget-scoring Johnson-Crapo, taking into account additional estimates, and discovering the second order effects of reform that might make moving away from the status quo more (or less) economically attractive could provide helpful insight.<sup>16</sup>

Furthermore, how stable is Johnson-Crapo over the business cycle? This procyclicality question is key for the overall advisability of the legislation, of course, as well as for an evaluation of how estimates of the cost of capital change over time.<sup>17</sup> Policymakers have yet to seek answers to these questions.

## THE COOPERATIVE ALTERNATIVE

Patricia Mosser, Joseph Tracy and Joshua Wright, researchers at the NY Federal Reserve Bank, separately offer the proposal of a lender-owned cooperative that both securitizes and guarantees standardized mortgage products through a mutualized securitization utility. Since the utility would have an in-house insurance function, the cooperative would be incented to maintain credit standards and decrease excessive risk taking.<sup>18</sup> It is argued

that a mutualized ownership structure could prevent deterioration in underwriting, rather than relying solely on regulation to accomplish this end. To support robustness and availability of securitization through the cycle, the utility is required to purchase government reinsurance against systemic credit events for whole vintages of mortgage securities. The vintage-based capital structure could mitigate the procyclicality of mortgage credit, thus reducing the private capital requirement far below the 15% level presented by Hancock and Passmore and even below the 10% level stated in Johnson-Crapo. In contrast to institution-level reinsurance, vintage-level reinsurance would help maintain investors' and issuers' incentives to continue participating in the utility, thereby facilitating business continuity through a crisis and subsequent recovery.

## REFORMING FANNIE AND FREDDIE

A phase-out of the GSEs will be costly, take a long time (potentially more than the five years stated in Johnson-Crapo given the size of the enterprises and the complexities of their operations), and leave room for hiccups in the MBS market during the transition. Reforming Fannie and Freddie by obtaining sufficient up front private capital to bolster the infrastructure already in place is another alternative to Johnson-Crapo, especially considering the inertia of the current system. The GSEs' infrastructure will be needed regardless in order to create the CSP, which the FHFA is already beginning to develop

under the joint ownership of Fannie and Freddie. With recapitalized GSEs with far larger capital requirements, sufficient to protect the government against all but catastrophic losses, the argument is that there is no need to manage risk by explicitly pricing the premium provided by the GSEs' implicit government guarantee. But a true reform of the current system means that the GSEs would have to be permitted to exit conservatorship after demonstrating that they can meet minimum regulatory capital requirements—a daunting task that could take up to five years itself.<sup>19</sup> Additionally, they would have to wind down their retained portfolios, the government guarantee would have to be addressed, and the question of “who owns the system?” must be answered.

In the absence of phasing out or reprivatizing Fannie and Freddie, there remains the option to continue along the current path of developing a CSP and a common security, which the government would stand behind.<sup>20, 21</sup> Not only does this raise the question of whether or not to merge Fannie's and Freddie's operations, but also whether the U.S. should de facto nationalize the housing finance system.

## ANALYSIS AND IMPLICATIONS OF THE COST OF CREDIT

This political question about the government's role in the housing market will inform the direction of legislation, but the answer to this question hinges upon a further question: what is the goal of housing finance reform generally?



Cross-subsidization of loans has been a GSE practice, but Johnson-Crapo's flexible incentive fee is its only form of cross subsidy. Absent other mandates, private capital in a first-loss position—one of the widely acknowledged requirements of reform—will lead to risk-based pricing, which will have implications for the procyclicality of the housing finance system as well as the sustainability of an affordable housing mandate.<sup>22, 23</sup>

There also remains the question of how much private capital in a first-loss position is really needed, which we return to now.

### THE CATASTROPHIC RISK INSURANCE CONDITION

New research from the Federal Reserve suggests, as other researchers have previously hypothesized, that the combination of the private sector first-loss capital requirement and

expectations of government bailouts in the event of a catastrophe would make government-sponsored securitization less competitive than private securitization during economic upswings. The options above are subject to this crowding out in an expansion phase of the cycle. A surprising new finding from a simulation analysis posits that, despite these generally agreed upon requirements of reform, all mortgages regardless of securitization (private vs. government) may need to be insured against catastrophic risk—an additional TRIA-like requirement. The researchers suggest that a mortgage insurance premium should be added on top of the other new costs of reform (namely, the capital costs associated with the private sector first-loss position and the increased g-fees designed to cover catastrophic default losses) because these costs are potentially insufficient and leave taxpayers exposed during a catastrophic economic event.<sup>24, 25</sup>

### OPPORTUNITIES FOR FURTHER ANALYSIS

Housing markets, investors, and borrowers have joined the GSEs in limbo over the last six years.<sup>26</sup> Ending the conservatorship of Fannie and Freddie is fundamental to any housing finance reform measure. Political issues aside, there are still unknowns that should be explored which would help shed light on whether a Johnson-Crapo-like path would be more or less advisable than an overhauling of the GSEs. As discussed above, one unknown is the stability of Johnson-Crapo over the business cycle. Another unknown entails budget-scoring Johnson-Crapo. But while these recommendations for further analysis are useful, nothing can take the place of political will. The United States government's open-ended assistance in the housing industry is not a feasible long-term strategy.



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