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### The Effects of Increasing Fannie Mae's and Freddie Mac's Capital

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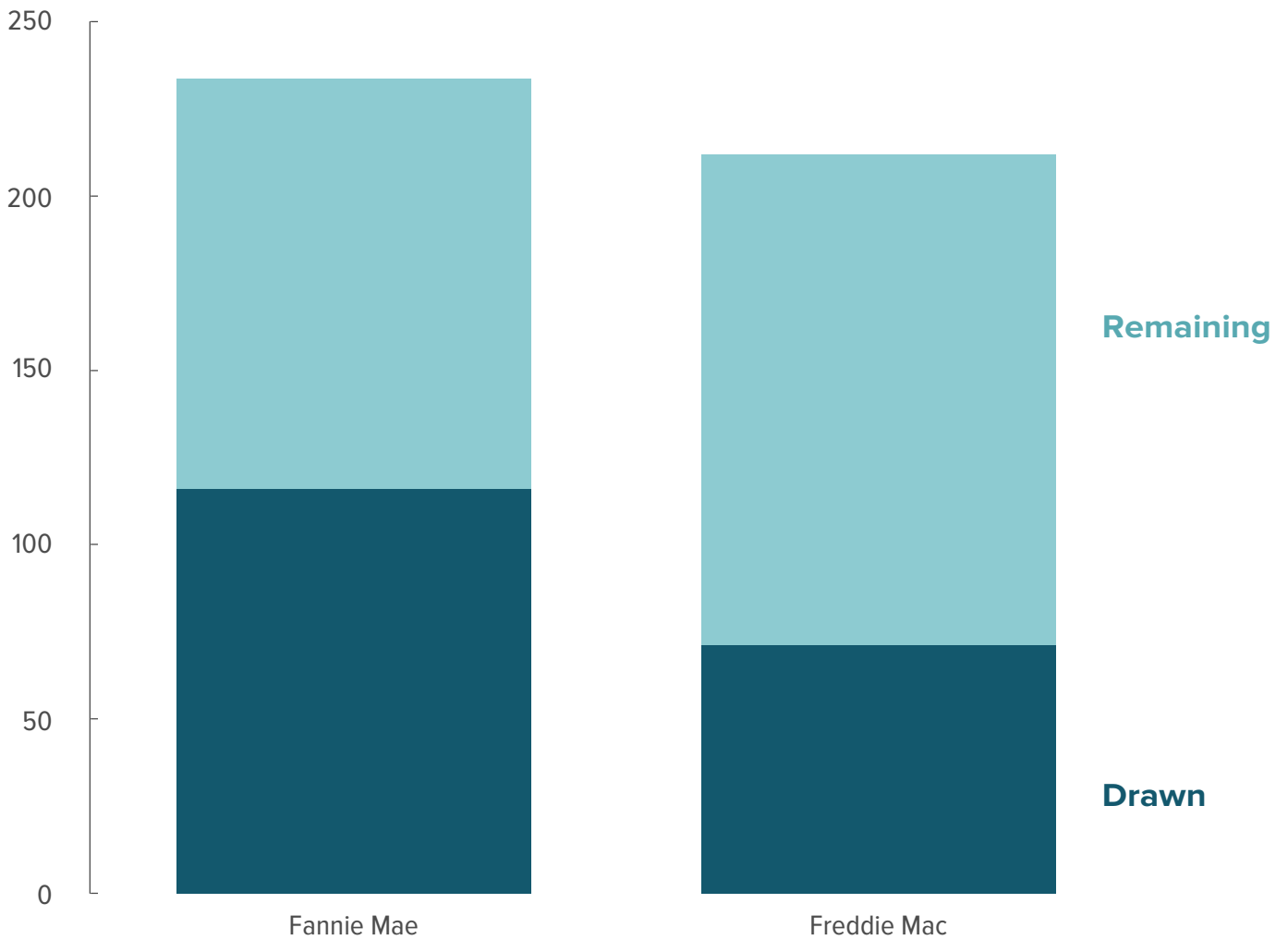
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# CBO

## The Effects of Increasing Fannie Mae's and Freddie Mac's Capital

Billions of Dollars



**Federal Assistance Under Current Law**

**OCTOBER 2016**

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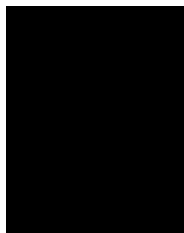
## Notes

Unless otherwise indicated, the years referred to in this report are federal fiscal years, which run from October 1 to September 30 and are designated by the calendar year in which they end.

Numbers in the text and tables may not add up to totals because of rounding.

The data underlying the figures in this report are available on CBO's website.

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# The Effects of Increasing Fannie Mae's and Freddie Mac's Capital

## Summary

Fannie Mae and Freddie Mac are government-sponsored enterprises (GSEs) that help finance the majority of mortgages in the United States. They purchase mortgages that meet certain standards from banks and other originators in the secondary (or resale) market; pool those loans into mortgage-backed securities (MBSs), which they guarantee against losses from defaults on the underlying mortgages; and sell those securities to investors. The two GSEs also buy mortgages and MBSs to hold in their investment portfolios.

## How Did the Relationship Between the Federal Government and the GSEs Change During the Financial Crisis?

In September 2008, as the global financial crisis intensified, the government placed Fannie Mae and Freddie Mac under federal conservatorship because of their risk of insolvency in the face of the large losses that they were projected to incur on their outstanding mortgage guarantees and investments. The prospect of the GSEs' becoming insolvent not only created uncertainty about their ability to continue to provide a stable source of funding for residential mortgages but also raised concerns about the spillover effects that their insolvency would have on investors and the economy.

At that time, using the authority granted to it under the Housing and Economic Recovery Act of 2008 (HERA; Public Law 110-289), the Department of the Treasury signed senior preferred stock purchase agreements with the two GSEs that included two main provisions. First, in any quarter in which Fannie Mae's or Freddie Mac's net worth becomes negative, the Treasury is obligated to purchase enough senior preferred stock (subject to limits) from the GSEs to restore them to positive net worth. Second, the GSEs must pay dividends to the Treasury on

the government's holdings of their senior preferred stock. (Like dividends paid on junior preferred and common stock, those payments do not reduce the outstanding amount of such stock.) Together, HERA and the senior preferred stock purchase agreements ensure that Fannie Mae and Freddie Mac maintain a positive net worth and that the government retains control and effective ownership of the two GSEs.

Between November 2008 and March 2012, the Treasury purchased \$187 billion of senior preferred stock from the two GSEs to cover their losses and ensure that they could continue to operate in the secondary market. The GSEs returned to profitability in 2012 as the economy and housing markets stabilized, and, consequently, they have not needed to draw on additional federal funds since then. As of September 30, 2016, \$258 billion of Treasury assistance remains available under the agreements to purchase additional senior preferred stock. That undrawn amount serves as an effective capital cushion and ensures that, under most circumstances, the GSEs would be able to pay investors who held their debt and mortgage-backed securities. Without that backstop, the value of the GSEs' equity and debt (including the government's holdings of senior preferred stock) would be much lower.

Under the current terms of the agreements, when Fannie Mae's or Freddie Mac's net worth exceeds a specified threshold (set to decline to zero in 2018), the GSE must pay dividends to the Treasury in the amount of that surplus. Essentially, the current agreements require the GSEs to pay all of their profits to the Treasury. As of the end of September 2016, the GSEs had paid about \$250 billion in dividends to the Treasury. Under current law, the Congressional Budget Office projects, they would pay an additional \$180 billion from 2017 through 2026.

The future of Fannie Mae and Freddie Mac is uncertain. The Administration announced that it intended to wind them down, but lawmakers have not agreed on what new structure for housing finance should be implemented.<sup>1</sup>

### What Policy Option Did CBO Analyze?

The policy option that CBO analyzed would not restructure the housing finance market; rather, it would allow the GSEs to retain some of their profits and thus increase their capital.<sup>2</sup> Because several bills have been introduced in the Congress with different approaches to building the GSEs' capital, CBO analyzed an illustrative option rather than a specific legislative proposal. Under the illustrative option, each GSE would be allowed to retain an average of \$5 billion of its profits annually and would thus increase its capital by up to \$50 billion over 10 years. The government's commitment to purchase more senior preferred stock from Fannie Mae and Freddie Mac if necessary to ensure that they maintain a positive net worth would remain in place. In addition, the GSEs would invest the profits that they retained under the option in Treasury securities, and returns on those securities would raise the GSEs' income. Through its holdings of senior preferred stock, the government would continue to have a claim to the GSEs' net worth ahead of other stockholders.<sup>3</sup>

1. See Congressional Budget Office, *Transitioning to Alternative Structures for Housing Finance* (December 2014), [www.cbo.gov/publication/49765](http://www.cbo.gov/publication/49765), and *Fannie Mae, Freddie Mac, and the Federal Role in the Secondary Mortgage Market* (December 2010), [www.cbo.gov/publication/21992](http://www.cbo.gov/publication/21992). See also Department of the Treasury and Department of Housing and Urban Development, *Reforming America's Housing Finance Market: A Report to Congress* (February 2011), [www.treasury.gov/initiatives/Pages/housing.aspx](http://www.treasury.gov/initiatives/Pages/housing.aspx).
2. Capital is the net worth of a business, which for accounting purposes is measured as the difference between estimates of what the business owns (its assets) and what it owes (its liabilities). That measure represents the ability of a business to absorb losses and pay off creditors without external assistance and is thus an important indicator of a business's soundness.
3. Alternatively, lawmakers could choose to reduce the funds available to the GSEs from the Treasury by the amount of dividends that the government forgoes or to deem that all or most of the government's holdings of senior preferred stock in the GSEs have been repaid, as some proposals before the Congress would do. Those policies could have markedly different effects on the federal budget than the policy option analyzed in this report.

### What Effects Would the Policy Option Have?

The policy option would affect the financial position of the GSEs, the stability of the mortgage market, and the federal budget. Specifically, implementing the option would have the following effects:

- Essentially convert a potential draw on federal funds (which would occur only in the event that the GSEs suffered a quarterly loss) into an immediate draw on those funds (in the form of forgone dividends to the Treasury);
- Increase the explicit federal backstop for the GSEs—and thus the risk to taxpayers—by the amount of the earnings that the GSEs retained (up to \$100 billion over 10 years);
- Reduce the likelihood of the Treasury's needing to purchase additional shares of senior preferred stock in the future, and thus lower the risk of the GSEs' exhausting the Treasury's support and disrupting the market;
- Diminish the government's net financial position (as measured by the market value of its assets and liabilities), but by much less than the amount of dividend payments forgone; and
- Result in a budgetary cost of about \$10 billion under CBO's approach to accounting for the GSEs, which measures the market value of the government's increased risk exposure.

Because the GSEs are, in CBO's view, effectively federal entities, the budgetary cost of the policy option would be the estimated market value of the increase in the government's exposure to losses on the GSEs' mortgage guarantees and investments.<sup>4</sup> The Administration treats the GSEs differently—as private companies that are outside the government. Consequently, its deficit projections reflect the cash transactions between the Treasury and the GSEs, whereas CBO treats such transactions as intra-governmental transfers that have no net impact on the deficit. Under the Administration's budgetary treatment, the policy option would have a budgetary cost that was

4. Lawmakers could eliminate that cost by shrinking the size of the federal commitment by the amount of the earnings that the GSEs retained, but if they did so, the option would no longer reduce the risk of exhausting the federal backstop.

significantly larger than CBO's estimate, roughly \$85 billion over 10 years.

### The Federal Government's Relationship With Fannie Mae and Freddie Mac

Fannie Mae and Freddie Mac are government-sponsored enterprises with the public mission of promoting access to home loans, including loans on housing for low- and moderate-income families, by providing a stable flow of funding for such loans.<sup>5</sup> The two GSEs do not originate mortgages—that is, they do not conduct business directly with people who are taking out mortgages to purchase a home. Rather, they function as intermediaries between retail mortgage lenders and capital investors. The two GSEs pool loans that they purchase from mortgage lenders to create mortgage-backed securities, which they guarantee against default and sell to investors—a process known as securitization. An investor who buys a single-family MBS guaranteed by one of the GSEs will be paid both the principal and interest that are due even if borrowers default on the underlying loans.<sup>6</sup> In exchange for guaranteeing the MBSs, the GSEs receive a guarantee fee from the originators of the mortgages that is effectively paid for by borrowers as part of their interest payments. Historically, the activities of Fannie Mae and Freddie Mac have been a major part of a broader federal housing policy aimed at encouraging home ownership and, to a lesser extent, making housing more affordable for low- and moderate-income families.

The federal government's relationship with Fannie Mae and Freddie Mac changed significantly in September 2008, when the government took control of the GSEs by placing them into the conservatorship of their regulator, the Federal Housing Finance Agency (FHFA). Further, the government assumed ownership of the GSEs by providing them with financial assistance in exchange for senior preferred stock and the right to purchase nearly 80 percent of their common stock at a very low price.

5. Although other GSEs exist—including the Federal Home Loan Banks, the Farm Credit System, and Farmer Mac—in this report the term *GSEs* refers only to Fannie Mae and Freddie Mac. The two GSEs operate in the secondary markets for both single-family and multifamily mortgages but not in the secondary market for commercial real estate loans.

6. In contrast, investors in multifamily MBSs share the credit risk with the two GSEs. See Congressional Budget Office, *The Federal Role in the Financing of Multifamily Rental Properties* (December 2015), [www.cbo.gov/publication/51006](http://www.cbo.gov/publication/51006).

The GSEs' debt and mortgage-backed securities are now effectively guaranteed by the federal government, and that backing substitutes for the capital that the GSEs would otherwise have needed to hold in order to back their guarantees. The government's financial support enables the GSEs to increase the availability of mortgage financing—a function that was particularly critical during the financial crisis—but it also explicitly exposes the government to risk from the mortgages that the GSEs guarantee. As of June 30, 2016, the two GSEs held, either directly or in trusts, mortgages worth \$5 trillion, about half of the nation's single-family mortgage debt. But they also had about \$5 trillion in liabilities—in the form of debt and MBSs that carried their guarantee—so they reported very little net worth.<sup>7</sup>

The GSEs operate under the direction of their conservator, FHFA, subject to the senior preferred stock purchase agreements that the Treasury, using its authority under HERA, entered into with the GSEs. The Treasury agreed to provide funds to the GSEs to keep their net worth from falling below zero in exchange for senior preferred stock.<sup>8</sup> The agreements, which have no expiration date, also prohibit Fannie Mae and Freddie Mac from raising capital from private investors as long as the Treasury holds their senior preferred stock. Accordingly, FHFA suspended the GSEs' capital requirements when they entered into conservatorship.<sup>9</sup> The Treasury's financial

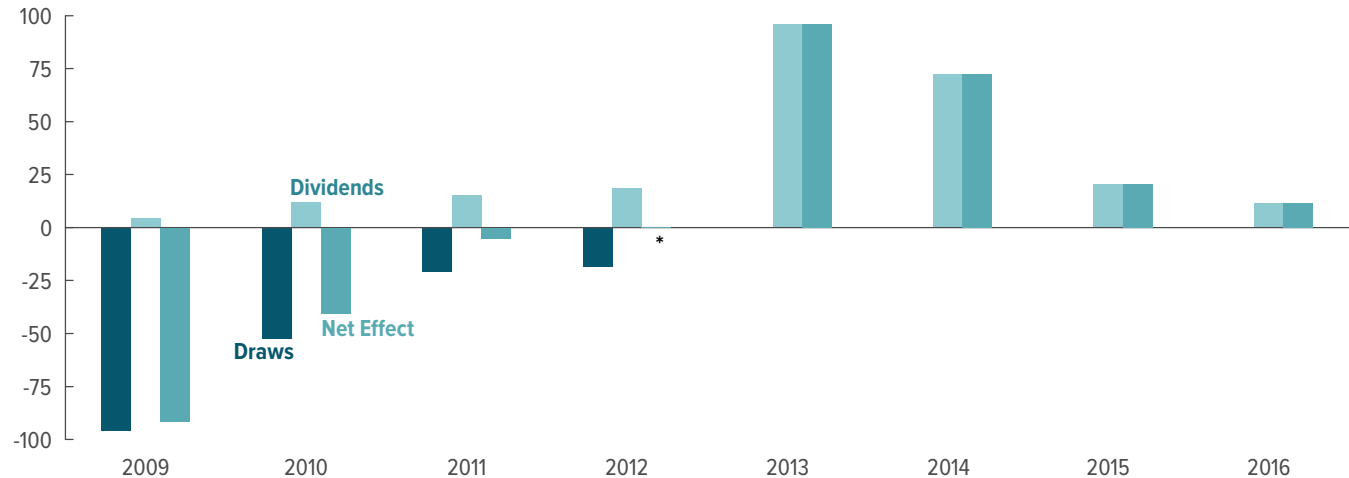
7. Fannie Mae and Freddie Mac report the outstanding mortgages that they purchase and hold in trusts as assets on their balance sheets. Those assets back an approximately equal amount of MBSs, which the GSEs report as liabilities.
8. The agreements also reduced the total dollar amount of mortgages in the GSEs' portfolios and placed a cap on the amount that they can retain in the future. See Federal Housing Finance Agency, "Senior Preferred Stock Purchase Agreements," (accessed October 18, 2016), <http://go.usa.gov/xZH9B>.
9. Before they were placed into conservatorship, the GSEs were required to maintain capital that was greater than or equal to 2.5 percent of their mortgage assets (which largely consisted of the MBSs and whole mortgage loans in their portfolios) plus 0.45 percent of their assets held in trusts (which backed the MBSs sold to investors). Their regulator also required an additional 30 percent capital surplus to protect against the uncertainty in the GSEs' operating performance. The surplus requirement was reduced to 20 percent on March 19, 2008. See Federal Housing Finance Agency, "Capital Requirements" (accessed October 18, 2016), <http://go.usa.gov/xZ62W>. See also Congressional Budget Office, *Measuring the Capital Positions of Fannie Mae and Freddie Mac* (June 2006), [www.cbo.gov/publication/17889](http://www.cbo.gov/publication/17889).



Figure 1.

### Effects of the GSEs' Draws From the Treasury and Dividend Payments to the Treasury on the Federal Deficit, 2009 to 2016

Billions of Dollars



Source: Congressional Budget Office.

The GSEs' draws from the Treasury increased the federal deficit, whereas their dividend payments to the Treasury reduced it.

Neither Fannie Mae nor Freddie Mac has drawn on the federal backstop (that is, the Treasury has not purchased any additional senior preferred stock in the two GSEs) since 2012.

Dividend payments were unusually large in 2013 and 2014, when the GSEs' earnings were increased by the release of \$75 billion of deferred tax asset valuation allowances and, to a lesser extent, by legal settlements of more than \$20 billion involving mortgage-backed securities purchased from private issuers.

The 10 basis-point fee on the GSEs' new guarantees that was imposed by the Temporary Payroll Tax Cut Continuation Act of 2011 (Public Law 112-78) is not reflected in the figure. From 2013 to 2016, the GSEs paid a total of \$8 billion in such fees to the Treasury.

GSEs = government-sponsored enterprises (specifically, Fannie Mae and Freddie Mac); \* = -\$100 million.

support is not recorded on the GSEs' balance sheets until the GSEs draw on it.

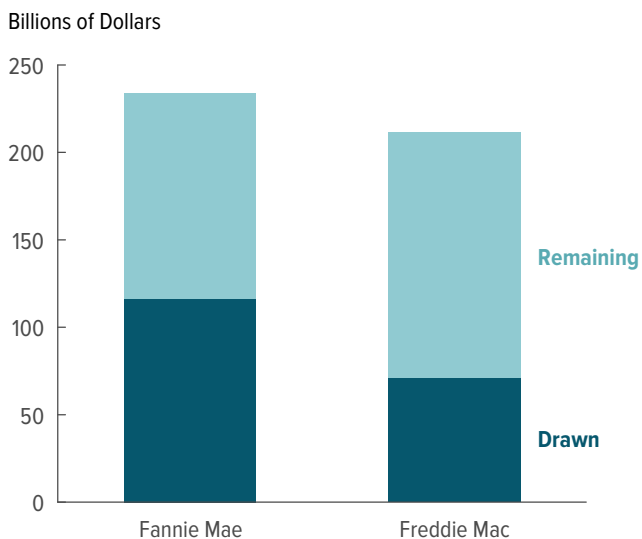
Under the agreements, in any quarter in which one of the GSEs incurs losses that would reduce its net worth below zero, the Treasury is required to purchase additional senior preferred stock to prevent that GSE's net worth from becoming negative. Requiring such purchases ensures that the GSEs can pay their debt obligations as they become due and that they can continue to borrow in the capital market to fund their operations. Between 2008 and 2012, the GSEs drew \$187.5 billion from the Treasury (see Figure 1). Although the government has already purchased large amounts of senior preferred stock from the GSEs, it could still purchase significantly more under the agreements. More than half of the funds that the Treasury has made available to the GSEs remain: As of September 30, 2016, Fannie Mae could draw an

additional \$118 billion, and Freddie Mac an additional \$141 billion (see Figure 2). If those funds were depleted, legislation providing additional funding would probably be necessary to keep the GSEs solvent.

The probability of Fannie Mae's or Freddie Mac's incurring losses that exceed the backstop available under the current agreements with the Treasury is low. In their baseline projections, which are the central estimates of possible outcomes, both CBO and the Administration anticipate that the GSEs will continue to pay cash dividends to the Treasury over the next 10 years. Moreover, according to FHFA's annual stress tests, both GSEs have enough federal backing remaining to survive another housing market crisis. Under the 2016 test's severely adverse scenario—in which house prices decline 25 percent and a severe recession occurs—estimates of the

Figure 2.

### Federal Assistance Available to the GSEs Under Current Law



Source: Congressional Budget Office.

Amounts indicated were current as of September 30, 2016.

GSEs = government-sponsored enterprises (specifically, Fannie Mae and Freddie Mac).

GSEs' combined draws on the Treasury ranged from \$50 billion to \$126 billion.<sup>10</sup>

Current contractual and legislative provisions ensure that the federal government will retain effective ownership of both GSEs for some time, unless lawmakers decide on the future of housing finance and take steps to restructure the market. Under their agreements with the Treasury and FHFA, Fannie Mae and Freddie Mac are prohibited from buying back their senior preferred stock. Moreover, the Consolidated Appropriations Act of 2016 (P.L. 114-113) limits the ability of the Treasury to sell, transfer, liquidate, or divest its holdings of preferred stock through January 1, 2018. (For more details on conserva-

torship and the agreements between the federal government and the GSEs, see the appendix).

In return for federal support, the agreements require Fannie Mae and Freddie Mac to pay dividends to the Treasury on the senior preferred stock.<sup>11</sup> Those payments totaled \$245 billion as of September 2016. Under the current agreements, the GSEs are required to make quarterly dividend payments in the amount of the net worth reported on their balance sheets (minus the small capital reserve balances that each is currently allowed to retain).<sup>12</sup> In practice, that means that the GSEs pay essentially all of their net income to the Treasury. Because the GSEs' payments to the Treasury are dividends on the government's holdings of senior preferred stock, they do not serve to repay the government for its past financial assistance or to buy back those holdings. Much of the income that the GSEs use to pay those dividends derives from the effective federal guarantee of their debt and MBSs that is provided by the government's commitment to purchase additional senior preferred stock if necessary. Without that guarantee, the GSEs would be significantly less profitable, even if they raised private capital, because their costs to issue debt and MBSs would be no lower than those of other very large financial firms. Thus, much of the value of the government's preferred stock in the GSEs derives from its own guarantee.

Private investors with holdings of preferred or common stock in the GSEs have filed several suits against the government over the current agreements and the GSEs' conservatorships. One of many claims is that the dividend payments to the Treasury constitute an illegal taking of private ownership rights without compensation. Even if the suits were successful, the Treasury would probably retain a claim to most of the income that the GSEs paid as dividends because the government holds all of their senior preferred stock, but other investors might be

10. The range depends on the treatment of the GSEs' deferred tax assets, which add to or subtract from the GSEs' income the value of their future tax deductions. See Federal Housing Finance Agency, *Dodd-Frank Act Stress Tests—Severely Adverse Scenario* (August 8, 2016), <http://go.usa.gov/xKzEz> (PDF, 295 KB). For a critical analysis of earlier stress tests, which severely underestimated potential credit losses, see W. Scott Frame, Kristopher Gerardi, and Paul S. Willen, *The Failure of Supervisory Stress Testing: Fannie Mae, Freddie Mac, and OFHEO*, Working Paper 2015-3 (Federal Reserve Bank of Atlanta, March 2015), <http://tinyurl.com/j2yghwk>.

11. In addition to the dividend payments, the GSEs must pay the Treasury a 0.10 percent fee on new guarantees under the Temporary Payroll Tax Cut Act of 2011. Those fees lower the GSEs' net income and thus their dividend payments to the Treasury.

12. In 2013, the Treasury agreed to allow the GSEs to retain a small capital reserve balance each year through 2017. The amount each enterprise could retain was set at \$3 billion in 2013 and was scheduled to be reduced by \$600 million each year through 2018, when it would reach zero under the current agreements. Those capital reserves are to be drawn down through larger dividend payments to the Treasury.

awarded a partial claim on that income in addition to any damages. CBO's projections of outcomes under current law do not reflect the possibility of private investors' prevailing in their suits.

### Effects of Allowing the GSEs to Increase Their Capital by Retaining a Portion of Their Earnings

Lawmakers have introduced proposals that would allow the GSEs to retain some or all of their income and thereby increase their equity capital.<sup>13</sup> To provide information about the effects of such policies, CBO analyzed an illustrative policy option that is similar to them. Specifically, beginning in 2017 the illustrative option would allow each of the GSEs to retain up to \$5 billion in net income each year (for a combined total of up to \$100 billion over 10 years) and would require them to invest those sums in Treasury securities to build up their capital.<sup>14</sup> The illustrative policy would not affect the government's current holdings of senior preferred stock, so the government's claim would continue to take priority over those of the GSEs' other preferred and common stockholders.<sup>15</sup>

13. See the Housing Finance Restructuring Act of 2016, H.R. 4913, 114th Cong; and the Let the GSEs Pay Us Back Act of 2015, H.R. 1036, 114th Cong. In addition, policy analysts have made several proposals. See, for example, Michael Krimminger and Mark A. Calabria, *The Conservatorships of Fannie Mae and Freddie Mac: Actions Violate HERA and Established Insolvency Principles*, Working Paper 26 (Cato Institute, February 9, 2015), <http://tinyurl.com/jkjs3e4>; and Alex Pollock, "Fannie and Freddie and the 10% Moment," *Wall Street Journal* (March 16, 2016), <http://tinyurl.com/zz7whrk>.

14. H.R. 4913 and H.R. 1036 would allow the GSEs to retain all of their income, which would change the magnitude of potential flows between the Treasury and the GSEs. But a larger capital buildup would—by itself—be unlikely to produce economic effects or result in costs that differed significantly from those estimated to occur under the illustrative policy option. Although the effective federal backstop would be bigger under those two bills, the probability that the GSEs would experience losses that would exhaust the backstop under the option is very small.

15. In contrast, H.R. 4913 and H.R. 1036 would retire most or all of the government's holdings of senior preferred stock. The bills would retroactively treat the government's purchase of senior preferred stock as a loan and the GSEs' dividend payments as payments of the principal and interest due on those loans. (Under H.R. 1036, future draws would also be considered loans.) In CBO's judgment, the two bills would be significantly more costly than the policy option analyzed in this report because of those provisions.

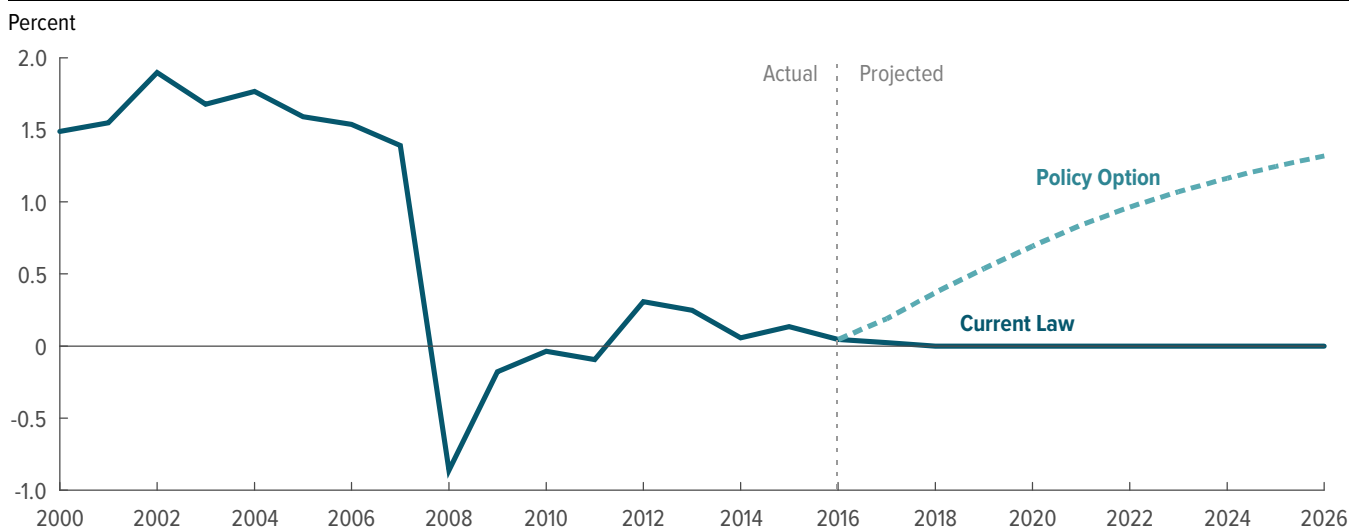
The illustrative option would increase the capital of each GSE by up to \$50 billion over 10 years. Because profits might be less than \$5 billion in some years, the option would allow the GSEs to make up for shortfalls by retaining more than \$5 billion in later years.<sup>16</sup> The maximum amount of profits retained by each GSE would, however, be capped at \$50 billion over 10 years. Although CBO projects that Fannie Mae will earn about \$110 billion and Freddie Mac about \$70 billion between 2017 and 2026, income streams are volatile, and a significant probability exists that the cumulative earnings of one or both of the GSEs will fall short of \$50 billion. At the end of 10 years, CBO projects, the GSEs would have a capital-to-asset ratio of at most a little more than 1 percent (see Figure 3).<sup>17</sup> Those retained earnings would provide a capital buffer that would reduce the probability of the GSEs' needing to draw on the remaining funds available under the preferred stock agreements. Capital reserves of that amount would not, however, be enough for the GSEs to operate without a government backstop.

Allowing the GSEs to retain a portion of their net income would increase the government's investment in the GSEs, providing them with additional resources to cover potential losses and thereby slightly increasing the stability of mortgage markets and the availability of credit. But providing those additional resources would expose the federal government to increased risk of losses: Measured on a present-value basis, the cost to the federal government of the additional exposure to losses incurred by the

16. For example, if one of the GSEs made \$5 billion in the first quarter of the first year, under the illustrative policy option it would be allowed to retain the entire amount. If it then lost \$2 billion in the second quarter, it could retain an additional \$2 billion over the last two quarters of the year to reach a total of \$5 billion of capital at the end of the first year. If instead the GSE lost \$2 billion in the first year, it could retain up to \$12 billion of earnings the second year to reach \$10 billion of capital at the end of that year. The policy would prohibit either GSE from retaining more than \$5 billion in the first year, so if one of the GSEs earned \$7 billion, for example, it would be required to pay the Treasury \$2 billion.

17. CBO projects that Fannie Mae will have about 60 percent of the GSEs' combined assets, so the option could be designed to allow Fannie Mae to retain \$60 billion and Freddie Mac \$40 billion over 10 years. That modification would allow the GSEs to attain similar capital ratios without changing the government's total loss exposure; however, allowing Fannie Mae to retain a larger share of the capital would increase the option's budgetary cost under CBO's method of accounting for the GSEs' activities (see "Budgetary Costs of the Policy Option" on page 13).

Figure 3.

**The GSEs' Capital Ratios, 2000 to 2026**

Source: Congressional Budget Office, using data from Fannie Mae and Freddie Mac.

Data are for calendar years.

Under the illustrative policy option, Fannie Mae and Freddie Mac would each retain up to \$5 billion of their earnings per year that they would otherwise pay to the Treasury as dividends on its shares of their senior preferred stock. Data in this figure reflect the assumption that each GSE would be able to retain that maximum amount each year.

The GSEs' capital ratio is calculated as the GSEs' combined assets minus liabilities, expressed as a share of their assets at the end of the year. For 2010 through 2015, those amounts were taken from the GSEs' annual balance sheets. The GSEs did not start recording most of their guarantees on their balance sheets until 2010, however, so CBO adjusted the amount of assets reported in earlier years to include the GSEs' outstanding mortgage-backed securities held by third parties. The 2016 amounts reflect data through June of that year.

The asset amounts are not risk-weighted.

GSEs = government-sponsored enterprises (specifically, Fannie Mae and Freddie Mac).

GSEs would be about \$10 billion, CBO estimates.<sup>18</sup> In addition, such a change in policy could deter current and potential competitors of the GSEs from participating in the market if they interpreted the change as a signal that the GSEs would eventually be restored to their previous state.

### Effects on the Federal Government's Explicit Commitment to the GSEs and Its Net Financial Position

Allowing the GSEs to retain earnings would in effect convert a potential future draw on federal funds into an immediate one equal to the amount of the dividends that the Treasury forgoes—as much as \$100 billion over

10 years. Such a change would mean that the first source of government funds used to cover the GSEs' losses would be the forgone dividends that the GSEs used to build their capital rather than the preferred stock that the Treasury is obligated to buy under its agreements with them. Because the amounts available under the existing Treasury agreements would be left in place, the explicit federal backing—and ultimately the risk that taxpayers bear—would effectively be increased by the amount of earnings that the GSEs retained. If policymakers wanted to avoid an increase in the explicit federal exposure to risk, an alternative approach would be to reduce the current federal commitment to purchase senior preferred stock by the amount of the dividends forgone. (The government's exposure to risk could also be reduced by shifting that risk to private capital or shrinking Fannie Mae's and Freddie Mac's obligations and investments; see Box 1.)

18. A present value is a single number that expresses a flow of future income or payments in terms of an equivalent lump sum received or paid at a specific point in time; the present value of a given set of cash flows depends on the rate of interest—known as the discount rate—that is used to translate them into current dollars.

## Box 1.

**Reducing the Costs and Risks Posed to the Government by the GSEs in Conservatorship**

As conservator of the government-sponsored enterprises (GSEs) Fannie Mae and Freddie Mac, the Federal Housing Finance Agency (FHFA) has already taken some steps to reduce their costs and risks to the government even as questions about the future structure of the secondary mortgage market remain unsettled. Most importantly, FHFA has directed the GSEs to share more of their credit risk with private investors, and some analysts believe that the private market could play an even bigger role in the future. Since July 2013, the GSEs have transferred about \$30 billion of credit risk to investors in transactions involving over \$1 trillion of mortgages through May 2016.<sup>1</sup> Until recently, most of those transactions were structured debt issuances, which are bonds that pay principal and interest on the basis of the performance of an underlying pool of guaranteed loans. Those bonds (called credit risk notes) effectively insulate Fannie Mae and Freddie Mac from a specified amount of mortgage losses on the pool of loans. The GSEs have also mitigated their exposure to credit risk by issuing subordinated mortgage securities without a guarantee, by purchasing insurance on pools of loans, and by having lenders retain some of the risk on the loans that they sell to them.<sup>2</sup>

For 2016, FHFA aimed to achieve risk sharing on at least 90 percent of the balances of new mortgages that meet certain criteria.<sup>3</sup> Those loans for which the GSEs share the credit risk with private investors serve as capital buffers against both expected and larger-than-expected credit losses and thus lower the probability of a large draw on the Treasury's financial backstop. Paying third parties for that insurance will, however, lower the GSEs' projected income. Because the transactions occur at market prices, the Congressional Budget Office does not project any budgetary costs or savings to result from such measures.<sup>4</sup>

Other ways for policymakers to reduce costs and risks to the taxpayers while the GSEs are in conservatorship include raising guarantee fees or lowering the conforming loan limits that determine the size of the mortgages that they are able to purchase and guarantee.<sup>5</sup> FHFA currently has the authority to employ those mechanisms, but lawmakers could also require such changes. Raising fees by a small amount would nearly eliminate the expected budgetary cost of guarantees and reduce the volume of guarantees. CBO estimates that the average guarantee fee charged by the GSEs, which has more than doubled since the start of their conservatorships, already compensates taxpayers for most of the risk that they bear. Lowering the eligible loan limits, which are currently \$417,000 in most areas of the country and up to \$625,500 in areas with high costs, would reduce the volume of guarantees.<sup>6</sup> Either action would create more opportunities for the private financing of mortgages, but each would also slightly increase the cost to borrowers.

1. For details on the different transactions, see Federal Housing Finance Agency, *Single-Family Credit Risk Transfer Progress Report* (June 2016), <http://go.usa.gov/xKzTA> (PDF, 599 KB), and *Overview of Fannie Mae and Freddie Mac Credit Risk Transfer Transactions* (August 2015), <http://go.usa.gov/xKzTZ> (PDF, 599 KB). See also Laurie Goodman and others, *How to Improve Fannie and Freddie's Risk Sharing Effort* (Moody's Analytics and Urban Institute, August 2016), <http://tinyurl.com/zmd5n37>; and Laurie Goodman, Jim Parrott, and Mark Zandi, *Delivering on the Promise of Risk-Sharing* (Moody's Analytics and Urban Institute, December 1, 2015), <http://tinyurl.com/hmj52qw>.

2. See, Andy Davidson and others, *Credit Risk Transfer: Making a Successful Program Even Better* (speaker presentations at the Sunset Seminar cohosted by the Urban Institute and CoreLogic, Washington, D.C., February 10, 2016), <http://tinyurl.com/zmnyvm6>.

3. Eligible loans carry fixed rates, have terms of at least 20 years, and have loan-to-value ratios above 60 percent. See Federal Housing Finance Agency, *2016 Scorecard for Fannie Mae, Freddie Mac, and Common Securitization Solutions* (December 17, 2015), <http://go.usa.gov/xKzTG>. See also Laurie Goodman and Jim Parrott, *A Glimpse at the Future of Risk Sharing* (Urban Institute, February 2016), <http://tinyurl.com/gv59ojj>.

4. In contrast, if the transactions were not competitive, or if for some other structural reason, the GSEs were overpaying to shed credit risk, then those transactions would have a cost under the method that CBO uses to account for the GSEs' activities.

5. For an assessment of various options, see Congressional Budget Office, *Transitioning to Alternative Structures for Housing Finance* (December 2014), [www.cbo.gov/publication/49765](http://www.cbo.gov/publication/49765).

6. By comparison, the median price of an existing home was about \$220,000 in December 2015, and the median price of a new home was about \$300,000.

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Continued

Box 1.

Continued

### Reducing the Costs and Risks Posed to the Government by the GSEs in Conservatorship

Another option available to policymakers—one that would accelerate the pace at which the GSEs wind down their operations and reduce the size of their mortgage portfolios—is to increase sales of the assets in the GSEs' investment portfolio.<sup>7</sup> Such sales would reduce future income to the GSEs. However, because they would largely occur at market prices and thus result in an exchange of assets of equal value, they would not significantly reduce costs to taxpayers as calculated under CBO's method of accounting for the GSEs' activities.

7. Lawrence J. White, *Housing, Housing Policy, and Housing Finance: Time for a Re-Assessment*, Working Paper EC-16-01 (NYU Stern School of Business, 2016), <http://tinyurl.com/z2folay>.

Although CBO projects that the government would forgo up to \$100 billion in dividends, the policy would not significantly change the government's net financial position (as measured by the market value of its assets and liabilities). Most of the earnings that the GSEs retained for their capital reserves would ultimately remain federal property through the government's holdings of senior preferred stock and warrants, and thus they would increase the value of those assets on the government's balance sheet. (The warrants, which were issued when the GSEs were placed into conservatorship, give the government the right to purchase 80 percent of the common stock in Fannie Mae and Freddie Mac.) The government's senior preferred stock, which has a redemption value of close to \$190 billion, takes priority over the ownership claims of other investors—including the claims of the holders of \$33 billion of junior preferred stock—in payment of dividends and repayment upon liquidation.<sup>19</sup> Consequently, the government would be exchanging a drop in dividend payments from the GSEs and thus an

increase in debt held by the public (a liability) for a higher-valued investment in the GSEs (an asset).<sup>20</sup> Those effects would not exactly offset each other, because the increased investment in the GSEs would come at the cost of further exposing the federal government to any losses that they might incur. (CBO factors that increase in the value of the effective federal backstop that the policy option provides into its estimate of the budgetary cost of the option. See "Budgetary Costs of the Policy Option" on page 13.)

The policy option could reduce the government's net financial position in the GSEs in three other ways. First, if investors prevailed in their suits against the government and were awarded an increased claim on the GSEs' net worth, then the option to allow Fannie Mae and Freddie Mac to build up their net worth could further diminish the government's claim. Second, if the GSEs spent some of the retained earnings instead of investing them, their net worth (and the government's claim on it) could increase by less than CBO projects. Third, if when implementing the option policymakers deemed that the dividend payments that the GSEs have already made to the Treasury were sufficient payment for the senior preferred stock and surrendered the claim that accompanies it, the government would effectively give away to private investors the rights to a significant portion of the GSEs'

19. The *redemption value* of the government's senior preferred stock is simply the *face amount* of the government's shares, whereas the *market value* of the holdings depends on the value of the future stream of the GSEs' dividend payments to the government. If the GSEs were liquidated, their holdings of Treasury securities (a maximum amount of \$100 billion) would be sold to the public, and the proceeds would go to the government as partial repayment for its holdings of senior preferred stock (currently about \$190 billion). Alternatively, if the GSEs were fully privatized, the government would have to compensate investors to take on the GSEs' existing obligations without an explicit federal guarantee of the GSEs' debts. The current guarantee fees that the GSEs charge are, by CBO's estimate, slightly below market rates, on average, and would not fully compensate investors for the risks that they would bear without a federal backstop. Thus, even if the GSEs were to retain \$100 billion in capital, it is unlikely that the market value of their net worth would equal that amount. Furthermore, without either an explicit or implicit federal guarantee of the GSEs, the value of the government's senior preferred stock would be significantly lower, and its warrants would probably be almost worthless.

20. In practice, the change reported on the government's actual balance sheet might differ from the change indicated by the simplified approach discussed here. The balance sheet records the Treasury's estimate of the value of the government's investment in the GSEs' senior preferred stock and warrants on the common stock on a fair-value basis. It does not, however, record the value of the liability represented by the government's support of the GSEs. As of September 30, 2015, the Treasury estimated that the GSEs would make no further draws from the funds available to them. See Department of the Treasury, *Financial Report of the United States Government, Fiscal Year 2015* (February 2016), pp. 60, 93–95, <http://go.usa.gov/xB5P3>.

income.<sup>21</sup> CBO did not account for any of those possible effects in its estimates.

Some observers, including many private holders of the GSEs' debt, do not believe that federal support is limited to the explicit amounts stated under current law and generally assume that the government would act to ensure that the GSEs could repay their obligations regardless of the amount.<sup>22</sup> Those observers would argue that the additional federal support provided under the policy option would increase the government's total explicit guarantee but leave the government's total risk exposure to the GSEs unchanged. Hence, from their perspective, the policy option would essentially have no effect on the government's net financial position.<sup>23</sup>

### Effects on the Mortgage Market

As its actions have demonstrated, the government is committed to ensuring that the mortgage market remains stable and that access to credit remains widely available. The policy option would probably make the market slightly more stable by reducing the likelihood of draws on the Treasury and the potential disruption that such draws could cause. CBO estimates that the probability that either Fannie Mae or Freddie Mac will draw additional funds from the Treasury in the next 10 years would fall significantly under the option. The option would also

reduce the already small likelihood that the GSEs would exhaust their federal backstop. Under current policy, if after large draws some market participants lost confidence in the sufficiency of the backstop to ensure that the GSEs retained a positive net worth and reacted by disinvesting from the mortgage market, liquidity could be impaired, which would raise costs to borrowers and potentially lower house prices.<sup>24</sup> The policy option would diminish the risk of those outcomes, but by changing expectations about the future role of the GSEs, the option might also reduce potential competition in the secondary mortgage market, which could make mortgage markets less efficient.

**Effects of the Lower Probability of a Small Draw.** The decreased likelihood of the GSEs' drawing a small amount from the Treasury that would result from implementing the option would probably have little effect on mortgage-related investments, because even if a small draw was made, it would not threaten the guarantees on outstanding GSE obligations or the GSEs' ability to guarantee new mortgages. The effective federal guarantee is a far more important factor to investors in assessing the creditworthiness of the GSE-issued MBSs than the amount of capital that the GSEs hold directly. The Department of Justice rendered an opinion stating that the Treasury's stock purchase agreements create enforceable claims against the Treasury for investors in GSE securities if one of the GSEs defaulted on its payments.<sup>25</sup> Investors appear to incorporate that guarantee into their valuation of GSE-issued MBSs, trading those securities at only slightly higher yields than Ginnie Mae-issued MBSs (which are explicitly guaranteed by the full faith and

21. Under such a scenario, holders of the junior preferred stock would have the first claim on income, not the government. In response, the Treasury could impose a commitment fee to compensate the government for the market value of its financial backstop (see the appendix). Such a commitment fee was part of the original agreements in 2008, but it was suspended in 2012 by the third amendment to those agreements. One of the bills before the Congress would, however, block the imposition of such a fee.

22. In addition to the GSEs' prominent role in mortgage and financial markets, the significant size of the Federal Reserve's holdings gives investors reason to assume an implicit federal guarantee of the GSEs. The Federal Reserve holds \$1.7 trillion of MBSs on its balance sheet—mostly those issued by the GSEs—which might provide additional motivation for lawmakers to act if the GSEs need support beyond the amounts available under current law.

23. The government's total risk exposure, according to those observers, is the sum of explicit and implicit risk exposure. From that perspective, the option would not change the government's total risk exposure, which depends mostly on the risks stemming from the GSEs' guarantees and portfolio holdings, so the increase in explicit risk would be offset by a reduction in implicit risk.

24. For further discussion of how a draw could negatively affect the mortgage markets, see Melvin L. Watt, Director, Federal Housing Finance Agency, prepared remarks for the Bipartisan Policy Center (February 18, 2016), <http://go.usa.gov/xB7Se>. Other observers, however, have expressed different views. See, for example, American Bankers Association and others, letter to the Honorable Melvin L. Watt, Director, Federal Housing Finance Agency (June 8, 2016), <http://tinyurl.com/jy7he98> (PDF, 79 KB).

25. See Steven G. Bradbury, Principal Deputy Assistant Attorney General, "Enforceability of Certain Agreements Between the Department of the Treasury and Government-Sponsored Enterprises," letter opinion for the Secretary of the Treasury (September 26, 2008), <http://go.usa.gov/xKYKe>.

credit of the federal government) and thus lowering the costs of issuing mortgages.<sup>26</sup>

Additional draws on the Treasury's financial support, however, could affect mortgage markets and actions of policymakers in several ways. Some lenders and other observers are concerned that another draw would be perceived as a bailout of the GSEs at the expense of the taxpayers and that, in response, regulators and lawmakers might tighten credit availability or raise interest rates for mortgage borrowers.<sup>27</sup> Whether policymakers and regulators would respond to those calls is uncertain and would probably depend on the factors contributing to the losses. Mounting credit losses might lead them to adjust fees and credit standards to protect taxpayers or to require the GSEs to share more credit risk with investors (see Box 1 on page 8). In contrast, transitory losses arising from accounting rules, such as those governing accounting for derivative securities, might be ignored.<sup>28</sup>

By reducing the likelihood of the GSEs' needing to draw funds made available by the Treasury under the preferred stock agreements, the policy option would probably loosen credit availability slightly and increase the number

of mortgages that are originated. Because the GSEs would have a bigger cushion against a draw on the Treasury, there might be more pressure to lower guarantee fees in years when they were profitable.<sup>29</sup> A drop in fees would bring down borrowers' mortgage rates and lead to increased loan originations. In addition, in years when the GSEs were unprofitable, there might be less pressure to raise fees and tighten eligibility requirements if they did not need to draw upon the backstop to cover their losses.

#### **Effects of Greater Confidence in the Mortgage Market.**

By effectively expanding the federal backstop, the policy option would lower the risk that large future draws on the Treasury's financial commitment would leave the explicit federal commitment greatly diminished. Mitigating that risk is beneficial because confidence in the GSEs and the housing finance market relies so heavily on the explicit federal commitment. If investors' confidence in the GSEs was to decline—as it might after a large draw, even if the Treasury's backing was not exhausted—investors would probably pay less for the GSEs' MBSs because they would expect to be compensated for bearing credit risk. In such a scenario, investors' participation and liquidity (the ease of trading securities) in the secondary market could also decline. Furthermore, because prices in the secondary market affect the rates and fees that banks and other loan originators charge, the loss of investors' confidence would increase the cost of credit for mortgage borrowers.

The immediate effects of the policy on confidence in the market would be small, CBO estimates, because the current federal commitments are large enough that the possibility of either GSE's exhausting the funds available to it is remote. Moreover, many investors assume the existence of an implicit guarantee above the explicit commitment. According to CBO's estimates, the likelihood that Fannie Mae's losses over the next 10 years would exceed the \$118 billion in funding that remains available to it under current law is about 2 percent, and Freddie Mac has almost no chance of incurring losses greater than its remaining \$141 billion backstop over that period. Under the policy option, CBO estimates, the probability of Fannie Mae's incurring losses over the next 10 years that

26. Ginnie Mae is a federal agency that guarantees MBSs that pool loans insured by the Federal Housing Administration, the Department of Veterans Affairs, and other federal agencies. Over the past 12 months, MBSs issued by Ginnie Mae have generally traded with yields that were 5 to 20 basis points lower than the yields on those issued by the GSEs. However, that difference can be attributed to a variety of factors other than the federal guarantee, including differences in prepayment speeds, the liquidity of the securities, and the effects of the Federal Reserve's purchases of Ginnie Mae-issued and GSE-issued MBSs.

27. See National Taxpayers Union and others, letter to Members of the U.S. Congress (May 10, 2016), <http://tinyurl.com/zpxw457>; and Community Home Lenders Association, Community Mortgage Lenders of America, and Independent Community Bankers of America, letter to the Honorable Melvin L. Watt, Director, Federal Housing Finance Agency (February 2016), <http://tinyurl.com/zuf7byyp> (PDF, 52 KB).

28. For example, policymakers chose not to take any action in the first quarter of 2016 when interest rates declined and Freddie Mac reported quarterly net losses of just over \$350 million. The lower interest rates led to large non-credit-related losses associated with declines in the value of the derivative securities that it holds to manage the risk of its mortgage portfolio (which were accompanied by unrecognized gains on the underlying loans). Freddie Mac's capital reserves were large enough that it was able to avoid a draw on the Treasury. See Freddie Mac, "Freddie Mac Reports First Quarter 2016 Financial Results" (press release, May 3, 2016), <http://tinyurl.com/jo4o7f6> (PDF, 239 KB).

29. Some market participants and consumer advocates have urged FHFA to lower guarantee fees. See America's Homeowner Alliance and others, letter to the Honorable Melvin L. Watt, Director, Federal Housing Finance Agency (June 22, 2016), <http://tinyurl.com/gna2xpv> (PDF, 193 KB).



Table 1.

**Effects of the Illustrative Policy Option on the GSEs' Dividend Payments to the Treasury**

Billions of Dollars

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total, 2017- 2026
Amount That the GSEs Retain as Capital	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	100.0
Minus: Return on Investment From Retained Capital <sup>a</sup>	-0.1	-0.4	-0.7	-1.0	-1.3	-1.7	-2.0	-2.4	-2.7	-3.1	-15.4
Reduction in Dividends Paid to the Treasury	9.9	9.6	9.3	9.0	8.7	8.3	8.0	7.6	7.3	6.9	84.6

Source: Congressional Budget Office.

Under the illustrative policy option, Fannie Mae and Freddie Mac would each retain up to \$5 billion of their earnings per year that they would otherwise pay to the Treasury as dividends on its shares of their senior preferred stock. Data in this table reflect the assumption that each GSE would be able to retain that maximum amount each year.

GSEs = government-sponsored enterprises (specifically, Fannie Mae and Freddie Mac).

a. Under the option, the GSEs would invest their retained earnings in 10-year Treasury securities, thus increasing their net income. That increase would be paid to the Treasury as dividends.

exceeded the capital reserves it would retain and its available Treasury funding—projected to be a total of \$168 billion—would be nearly eliminated. As it is under current law, the probability of Freddie Mac's incurring losses greater than its maximum total backstop of \$191 billion under the policy option over the next 10 years would be almost zero.

The reason that the likelihood of exhausting federal support is different for Fannie Mae and Freddie Mac is that both GSEs were allocated nearly the same size federal backstop even though they are significantly different-sized enterprises. Freddie Mac holds \$2 trillion in assets, whereas Fannie Mae holds nearly \$3 trillion. Freddie Mac has therefore needed to draw less of the funds available to it under the Treasury agreements than Fannie Mae, and it is projected to have smaller losses in the future, even under adverse economic and financial conditions.

### Effects on the GSEs' Operations and on Expectations About Their Future

The policy option would probably not significantly change how the GSEs operate. Because of the federal backstop established under their agreements with the Treasury, the GSEs' lack of capital does not currently constrain their ability to guarantee MBSs. The option would raise the GSEs' capital reserves by a maximum of \$100 billion over 10 years. To be consistent with the current agreements, which limit the size of the GSEs' portfolios of mortgages held for investment, the illustrative option would require that the earnings be invested in Treasury securities, which could be quickly converted

into cash to cover losses.<sup>30</sup> Those investments in Treasury securities would generate additional income for the GSEs, which could amount to as much \$3 billion per year by 2026 if the holdings earned returns at the rate projected for 10-year Treasury securities, CBO estimates.<sup>31</sup> (That additional income would flow to the Treasury; see Table 1.)

Lawmakers have not yet decided on the future of the mortgage finance system, and some observers oppose proposals (such as this policy option) that would increase the GSEs' capital on the grounds that such proposals would defer reforms to the secondary mortgage market that they consider necessary.<sup>32</sup> Although the way that the GSEs operated before conservatorship provided a steady supply of mortgage credit, it presented risks to the stability of the larger financial system and had major structural weaknesses, including an implicit federal guarantee that led to systemic risk, the concentration of market power in the

30. Alternatively, the option could be structured to allow the GSEs to use some of the retained earnings to pay down their debt, which would have other effects.

31. In its August 2016 baseline, CBO projected that rates on 10-year Treasury securities would rise from about 1.5 percent in August 2016 to 3.6 percent by 2022 and stabilize thereafter. See Congressional Budget Office, *An Update to the Budget and Economic Outlook: 2016 to 2026* (August 2016), [www.cbo.gov/publication/51908](http://www.cbo.gov/publication/51908).

32. See, for example, American Bankers Association and others, letter to the Honorable Melvin L. Watt, Director, Federal Housing Finance Agency (June 8, 2016), <http://tinyurl.com/jy7he98> (PDF, 79 KB).

two GSEs, and a lack of transparency about the costs and risks borne by the government.<sup>33</sup> If implementing the option increased expectations that the GSEs would play a dominant role after emerging from conservatorship, the government's options for restructuring the mortgage finance system might be constrained, because private investors might be less willing to prepare to play a significant role in the secondary market in the future. Consequently, the option might limit competition in that market.

### Budgetary Costs of the Policy Option

CBO and the Administration use different budgetary treatments to account for the activities of Fannie Mae and Freddie Mac, and they would therefore have different estimates of the cost of the option. CBO treats the GSEs as federal entities when making its baseline budget projections and cost estimates, whereas the Administration treats them as private companies.

Although Fannie Mae and Freddie Mac are not legally government agencies, CBO includes their financial transactions alongside all other federal activities in the budget because the federal government owns and controls them and is operating them for the benefit of the public. Under that treatment, CBO shows as federal outlays the estimated present value of the GSEs' new credit activity each year. Those estimates are constructed on a fair-value basis that reflects the cost of market risk—the risk taxpayers face because federal payments to cover losses on guaranteed mortgages tend to be high when the economic and financial conditions are poor and resources are therefore more valuable.<sup>34</sup> The Administration, in contrast, reports the GSEs' annual cash transactions with the Treasury—currently mostly dividend payments to the Treasury—in the budget. CBO believes that its approach more appropriately reflects the GSEs' current relationship with the government and provides more relevant and comprehensive information to policymakers.

Under CBO's approach, the estimated cost of the option is calculated on the basis of the change in the estimated market value of the government's net obligation to investors in the GSEs' debt and MBSs; thus, the estimate

measures the up-front payments that a private entity would need to receive (in an orderly market and allowing for the guarantee fees that borrowers pay indirectly) to assume the federal government's responsibility for the additional exposure to losses under the option. Under the Administration's approach, the option would result in much larger budgetary costs, reflecting the reduction in annual dividend payments made by the GSEs.

### The Cost Estimated Using CBO's Budgetary

**Treatment.** Because CBO treats the GSEs as federal entities, under its method the cash transactions between the Treasury and the GSEs (the purchases of preferred stock and any dividends paid on that stock) simply represent payments from one part of the government to another. Therefore, CBO treats the retained amounts that would be used to increase the GSEs' capital under the policy option (amounts that would go to the Treasury in the form of dividend payments under current law) as intra-governmental transfers that would not have budgetary consequences. As a result, the changes in the GSEs' dividend payments to the Treasury that would stem from the policy option would have no effect on projected deficits.

Instead, under CBO's approach the estimate of the budgetary cost of the option arises from the increased exposure of the government to losses incurred by the GSEs. That estimate is unaffected by whether the GSEs first paid their losses out of their retained capital or by drawing down the Treasury's backstop. Rather, the estimated cost stems from the increase—from \$258 billion to \$358 billion—in the maximum size of the total losses that would be covered under the option. If the GSEs' losses exceeded the current backstop of \$258 billion, the

33. A federal backstop would most likely be required during the transition to a new market structure, regardless of the specifics of the structure. See Congressional Budget Office, *Fannie Mae, Freddie Mac, and the Federal Role in the Secondary Mortgage Market* (December 2010), pp. 21–25, [www.cbo.gov/publication/21992](http://www.cbo.gov/publication/21992).

34. CBO's baseline projections incorporate the market value of only the new mortgages that the GSEs are expected to guarantee in the coming decade. If a legislative proposal would affect the value of the GSEs' previously issued guarantees (as the policy option would), CBO would incorporate any changes in the market value of those guarantees into its estimate of the cost of the proposal. In either case, market values are estimated by projecting the net cash flows associated with the relevant mortgage commitments and using discount rates that reflect the rate of return that the government would be expected to earn on investments or securities of comparable risk to convert those cash flows into present values. For more information, see Congressional Budget Office, *CBO's Budgetary Treatment of Fannie Mae and Freddie Mac* (January 2010), [www.cbo.gov/publication/41887](http://www.cbo.gov/publication/41887), and letter to the Honorable Barney Frank about the budgetary impact of Fannie Mae and Freddie Mac (September 16, 2010), [www.cbo.gov/publication/21707](http://www.cbo.gov/publication/21707).

government would incur costs under the option that it would not incur under current law, because up to \$100 billion of additional funds would be available to the GSEs under the option. (Consequently, from a budgetary perspective, the option considered here would be equivalent to an option that increased by \$5 billion per year the amount of preferred stock that the Treasury could purchase from each of the GSEs but that did not change their dividend payments to the Treasury.)

Following that approach, CBO estimates that the policy option would have a cost of about \$10 billion, measured on a present-value basis. (For a fuller description of the method, see Box 2). CBO attributes almost all of that cost to Fannie Mae because of the much higher probability of Fannie Mae's incurring losses that exceed the remaining federal commitment under current law. (The likelihood of Freddie Mac's losses' exceeding the remaining funds available to it is much lower but not zero.)

CBO estimates the effects of the policy option in relation to what would probably occur under current law. Although the Treasury and FHFA could use the broad authority granted them under HERA to implement the policy option (or other options) without legislation by further amending their agreements with the GSEs, CBO believes that they are very unlikely to do so. Consequently, such possible changes to policy are not incorporated into the baseline budget projections and would be incorporated only if they were announced. Moreover, CBO's estimates reflect only the explicit federal guarantee established under current law and current policy, not the implicit federal guarantee that many observers believe to exist.

**The Cost Estimated Using the Administration's Budgetary Treatment.** In contrast to CBO's budgetary treatment, the Administration treats Fannie Mae and Freddie Mac as private companies that are separate from the government and thus reports only their cash transactions with the Treasury rather than all of their financial activities. The Administration projects that, under current law, such transactions will result in net inflows to the Treasury of \$170 billion from 2017 to 2026.

From the perspective provided by the Administration's approach, if the policy option was implemented, the

government would be giving the GSEs \$100 billion (by allowing them to retain that income) and would receive the benefit of the potential for smaller draws on Treasury funds in the future. When accounted for on a cash basis, the GSEs' payments to the Treasury reduce the deficit, whereas draws by the GSEs on the federal backstop increase it. Consequently, the actual net cash transfers that the GSEs made to the Treasury would be smaller under the policy option than they would be under current law, and the budget deficits that the Office of Management and Budget recorded would be bigger. Under the Administration's budgetary treatment, the drop in cash receipts under the option—if each of the GSEs retained the maximum of \$50 billion in earnings over 10 years—would result in an \$85 billion increase in the deficit over the period (see Table 1 on page 12). (The change would be \$15 billion less than the \$100 billion in forgone dividends because the GSEs would earn income from their increased holdings of Treasury securities and because that additional income would boost the dividends paid to the Treasury.) Debt to the public would rise by the same amount.<sup>35</sup>

By reducing the flow of funds from the GSEs to the government, under the Administration's accounting approach, the policy option would reduce the estimated budgetary costs of any later transition to a new structure for housing finance that would require the government to give up much of its income from the GSEs—such as if Fannie Mae and Freddie Mac were privatized or if they were replaced by a hybrid public-private market with a federal guarantee against catastrophic losses. By contrast, under CBO's accounting approach, the cost of a transition to a new structure for housing finance that emphasized private capital would not be significantly affected by whether the GSEs were allowed to retain capital.<sup>36</sup>

35. Neither CBO nor the Office of Management and Budget incorporates the debt securities or MBSs issued by the GSEs in estimates of federal debt held by the public or of gross federal debt. See Congressional Budget Office, *Federal Debt and Interest Costs* (December 2010), pp. 2–3, [www.cbo.gov/publication/21960](http://www.cbo.gov/publication/21960).

36. Congressional Budget Office, *Transitioning to Alternative Structures for Housing Finance* (December 2014), [www.cbo.gov/publication/49765](http://www.cbo.gov/publication/49765).

**Box 2.**

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**CBO's Method for Estimating the Present-Value Cost of the Policy Option**

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Under the Congressional Budget Office's method of accounting for the financial activities of the two government-sponsored enterprises (GSEs) Fannie Mae and Freddie Mac, the cost to the federal government of allowing each GSE to retain up to \$50 billion in capital over 10 years is equal to the estimated market value of the increase in the government's exposure to the GSEs' losses. The cost of the option stems from the possibility that the GSEs could incur losses in the future that exceeded the federal backstop in place under current law (a combined total of \$258 billion as of September 30, 2016). The portion of such losses that exceeded the current backstop but that was below the higher effective backstop that would be in place under the option (up to \$358 billion by the end of the 10-year period) represents additional draws that the GSEs could make on the Treasury under the option that they could not make under current law.

CBO used a present-value method to estimate the market value of the increased federal exposure to losses.<sup>1</sup> The agency first simulated thousands of paths of house prices, interest rates, and other variables that drive the GSEs' profitability. It then used those paths to determine the likelihood that one or both of the GSEs would experience cumulative losses on the mortgages in their portfolios over the lifetime of the loans that exceeded the remaining federal backstop under current law. (That estimate includes losses on mortgages currently held by the GSEs and on mortgages that they are projected to acquire through 2026.) The cost of the option is expressed as a present value by averaging the additional draws from the simulated paths and then converting that sequence of average draws into a single amount using a discount rate that includes an adjustment for the market risk associated with those draws. The adjustment for market risk results in an estimate of costs that greatly exceeds the simple average of draws discounted at a safe, nominal discount rate, such as the yield on Treasury securities.<sup>2</sup> Because it includes an adjustment for market risk, the present-value amount approximates the price that a private investor would charge to take on the additional risk exposure to the GSEs that would be created by the option.

CBO estimates that the cost of the option to the federal government would be about \$10 billion. That estimate is very uncertain, however, and is particularly sensitive to the agency's projections of the factors that affect the amount and variability of the GSEs' profitability and to its estimates of the portion of mortgage investment returns that constitutes compensation for market risk. Uncertain factors that drive the amount of profitability include the guarantee fees that the GSEs will charge and the composition of their mortgage guarantees and investment portfolios over the next decade. The projected variability of the GSEs' profitability is determined primarily by CBO's estimates of the variation in macroeconomic factors such as house prices and interest rates.

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1. A present value is a single number that expresses a flow of future income or payments in terms of an equivalent lump sum received or paid at a specific point in time.
  2. Market risk is the component of risk that remains even after a portfolio has been diversified as much as possible. It arises because most investments tend to perform relatively poorly when the economy is weak and relatively well when it is strong. People value income from investments more when the economy is weak and incomes are relatively low, so they assign a higher cost to losses that occur during economic downturns. The cost of market risk captures the higher cost today of future losses in bad times (as well as the lower cost in good times). For an example of an estimate that was produced using the fair-value approach (that is, one that incorporates the cost of market risk), see Congressional Budget Office, cost estimate for S. 1217, the Housing Finance Reform and Taxpayer Protection Act of 2014 (September 5, 2014), [www.cbo.gov/publication/45687](http://www.cbo.gov/publication/45687).
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# Appendix:

## The GSEs' Operations and the Risks They Pose to the Government Under Conservatorship

In September 2008, the federal government assumed control of the two government-sponsored enterprises (GSEs) Fannie Mae and Freddie Mac, both of which were ailing in the wake of the global financial crisis. Although conservatorship has ensured that Fannie Mae and Freddie Mac have continued to perform their public missions, it has also meant that their activities now impose greater explicit costs and risks to the government. The Treasury's senior preferred stock purchase agreements with the GSEs—which currently govern the financial relationship between the parties and define their obligations to each other—have been amended several times to provide more stability to the mortgage market and to do more to compensate taxpayers for bearing the risk posed by the GSEs' activities.

### The GSEs' Three Key Missions

Fannie Mae and Freddie Mac were federally chartered decades ago to fulfill several public missions:

- Establish an infrastructure for the secondary market for residential mortgages,
- Provide stability and ongoing assistance to that market, and
- Promote access to mortgage credit throughout the nation.

The secondary mortgage market facilitates the resale of mortgages and mortgage-backed securities (MBSs) to ensure that credit remains available to homebuyers. Mortgage lenders can obtain funding for the new loans that they originate by selling existing loans to Fannie Mae, Freddie Mac, and other financial institutions in the secondary market.

Even before the federal government placed the GSEs into conservatorship, many investors perceived the GSEs' debt and MBSs as having an implicit federal guarantee. That perception stemmed from the prominent role that the GSEs played in the housing market and in the broader financial market, as well as from the special benefits conferred by their charters, and it gave them a borrowing advantage over other financial firms.<sup>1</sup> Those advantages made their guarantees more valuable than they would have been otherwise and allowed them to pay more for mortgage assets than their competitors, which lowered mortgage rates for borrowers.<sup>2</sup> The GSEs retained some of the value of their borrowing advantage, so the government's implicit financial backing provided a source of net worth to shareholders in Fannie Mae and Freddie Mac. Without the implied federal backstop, the GSEs would have had to compete with other firms on more equal terms, and the value of shares of their preferred and common stock would have been considerably lower.

The strength of the implicit federal guarantee was tested in summer 2008, when the expected losses on Fannie Mae's and Freddie Mac's outstanding MBSs and investment portfolios threatened their solvency and impaired their ability to issue debt, buy mortgages, and continue making payments on their obligations.<sup>3</sup> The

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1. Congressional Budget Office, *Federal Subsidies and the Housing GSEs* (May 2001), [www.cbo.gov/publication/13072](http://www.cbo.gov/publication/13072), and *Updated Estimates of the Subsidies to the Housing GSEs* (April 2004), [www.cbo.gov/publication/15556](http://www.cbo.gov/publication/15556).
  2. Congressional Budget Office, *Interest Rate Differentials Between Jumbo and Conforming Mortgages, 1995–2000* (May 2001), [www.cbo.gov/publication/13071](http://www.cbo.gov/publication/13071).
  3. W. Scott Frame and others, "The Rescue of Fannie Mae and Freddie Mac," *Journal of Economic Perspectives*, vol. 29, no. 2 (Spring 2015), pp. 25–52, <http://dx.doi.org/10.1257/jep.29.2.25>.

government's decision to rescue the GSEs and to place them into conservatorship averted their collapse and made most of the implicit guarantee explicit.

## The Goals of the Federal Housing Finance Agency

As conservator of the GSEs, the Federal Housing Finance Agency (FHFA) has broad authority under the Housing and Economic Recovery Act of 2008 (HERA) to manage Fannie Mae and Freddie Mac while leaving the operational duties to their management and boards.<sup>4</sup> Although the two GSEs continue to operate legally as private corporations, FHFA is responsible for taking actions necessary to put them in a sound and solvent condition, enable them to carry on their business, and preserve and conserve their assets and property. At times, those three goals conflict. Since the GSEs were placed into conservatorship, lawmakers have been developing and debating new structures for the secondary mortgage market.

Being under federal conservatorship—and thus having the explicit financial backing of the federal government—has allowed Fannie Mae and Freddie Mac to continue to ensure that mortgage financing is widely available for homebuyers (although the GSEs' conservatorships also make it so that the government explicitly bears most of the mortgage credit risk). That function was particularly important after the 2007–2009 recession, when the extension of credit by the GSEs supported the economic recovery.<sup>5</sup> The GSEs' role has declined in the last few years as the private mortgage market has gained strength and financing has become readily available for jumbo mortgages that exceed the amount that the GSEs may purchase and guarantee. Between 2008 and 2013, Fannie Mae and Freddie Mac typically guaranteed more than

60 percent of new mortgages. In 2015, they guaranteed less than 50 percent of new single-family mortgages.<sup>6</sup>

The Congressional Budget Office projects that the GSEs' new mortgage guarantees made between 2017 and 2026 would, under current law, have a cost to the government of about \$12 billion—a relatively small amount given that guarantees are projected to average more than \$1 trillion annually over the period (see Table A-1).<sup>7</sup> CBO projects that the government will incur a cost for Fannie Mae's and Freddie Mac's guarantees because it estimates that the GSEs charge guarantee fees that are, on average, slightly too low to cover expected losses and compensate taxpayers for the market risk that they bear.

## The Explicit Federal Guarantee of the GSEs' Debt and MBSs Under the Senior Preferred Stock Purchase Agreements

Unlike other financial institutions, the GSEs do not need equity capital to operate.<sup>8</sup> They can effectively guarantee MBSs without capital on their balance sheets because the government guarantees their debt and MBSs while they are in conservatorship.<sup>9</sup> In light of the senior preferred stock purchase agreements and in anticipation of the GSEs' reporting losses in the future, FHFA suspended Fannie Mae's and Freddie Mac's capital requirements when they entered conservatorship. The initial agreements allowed the Treasury to purchase \$100 billion of securities from each of the two GSEs to restore their

4. N. Eric Weiss, *Fannie Mae and Freddie Mac in Conservatorship: Frequently Asked Questions*, Report for Congress R44525 (Congressional Research Service, June 15, 2016).

5. Deborah Lucas, "Credit Policy as Fiscal Policy," *Brookings Papers on Economic Activity* (Spring 2016), pp. 1–50, <http://tinyurl.com/hjsra3j>; and Wayne Passmore and Shane M. Sherlund, *Government-Backed Mortgage Insurance, Financial Crisis, and the Recovery From the Great Recession*, Finance and Economic Discussion Series Paper 2016-031 (Board of Governors of the Federal Reserve System, April 2016), <http://dx.doi.org/10.17016/FEDS.2016.031> (PDF, 901 KB).

6. Fannie Mae and Freddie Mac guaranteed \$825 billion of MBSs in 2015; that year, total mortgage originations amounted to \$1,735 billion. See Inside Mortgage Finance, *Mortgage Market Statistical Annual, 2016 Yearbook* (Inside Mortgage Finance Publications, 2016), p. 3, <http://tinyurl.com/zl9hygh>.

7. See Congressional Budget Office, "Baseline Projections for Selected Programs: Federal Programs That Guarantee Mortgages" (March 2016), [www.cbo.gov/publication/51297](http://www.cbo.gov/publication/51297).

8. Capital is the net worth of a firm, which for accounting purposes is measured as the difference between estimates of what the firm owns (its assets) and what it owes (its liabilities). That measure represents the ability of a private firm to absorb losses and pay off creditors without external assistance and is thus an important indicator of a firm's soundness.

9. For an analysis of the role that capital could play in a restructured mortgage system, see David Scharfstein and Phillip Swagel, *Legislative Approaches to Housing Finance Reform* (working paper, Milken Institute, June 2016), pp. 7-12, [www.milkeninstitute.org/publications/view/810](http://www.milkeninstitute.org/publications/view/810).

Table A-1.

**Budgetary Impact of the GSEs in CBO's August 2016 Baseline**

Billions of Dollars

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total 2017- 2026
Annual Loan Volume	818	818	864	949	996	1,000	1,166	1,250	1,326	1,397	1,463	11,229
Annual Subsidy Costs <sup>a</sup>	n.a.	2.5	1.9	1.2	0.8	0.4	0.9	0.9	1.0	1.2	1.5	12.3
Cash Receipts <sup>b</sup>	-14.4	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Subsidy Rate <sup>c</sup> (Percent)	n.a.	0.3	0.2	0.1	0.1	*	0.1	0.1	0.1	0.1	0.1	n.a.

Source: Congressional Budget Office.

GSEs = government-sponsored enterprises (specifically, Fannie Mae and Freddie Mac); n.a. = not applicable; \* = less than 0.05 percent.

- a. For 2017 through 2026, the baseline included the projected subsidy costs of new mortgage loans and guarantees made by Fannie Mae and Freddie Mac on a fair-value basis.
- b. In general, CBO views the GSEs' dividend payments to the government as intragovernmental transfers, which have no net budgetary effect. For fiscal year 2016, however, the baseline included an estimate of mandatory cash payments from Fannie Mae and Freddie Mac to the Treasury to match the Administration's treatment of those transactions in the *Monthly Treasury Statements*.
- c. The subsidy rate is the subsidy cost per dollar of new guarantee.

positive net worth.<sup>10</sup> The first amendment to those agreements raised the amount of explicit federal support for each GSE to \$200 billion. In December 2009, the agreements were amended again to raise the financial backstop to \$200 billion plus the cumulative amount of draws on the Treasury from 2010 through 2012, minus any capital surplus on the GSEs' balance sheets as of December 31, 2012. As of September 30, 2016, Fannie Mae still had \$117.6 billion of Treasury funding available, and Fannie Mae had \$140.5 billion remaining.

### The GSEs' Capital Reserves and Their Financial Obligations to the Treasury Under the Senior Preferred Stock Purchase Agreements

Among other provisions, the initial senior preferred stock purchase agreements signed in 2008 required the GSEs to pay the Treasury dividends equal to 10 percent of the

redemption value (that is, the face value) of the shares of senior preferred stock it held. The agreements also gave the Treasury the right to charge a quarterly commitment fee to compensate the government for the value of the federal backstops provided to the enterprises.

The terms of the dividend payments were modified by the third and latest amendment to the agreements, which was ratified in August 2012. That amendment requires Fannie Mae and Freddie Mac to pay the Treasury essentially all of their profits (referred to as an "income sweep") rather than the previous fixed-rate dividend of 10 percent on its shares of senior preferred stock.<sup>11</sup> The current agreements effectively preclude the two GSEs from building up their capital reserves. (Fannie Mae and Freddie Mac are temporarily allowed to retain a small amount of capital reserves, but that amount decreases each year, falling from \$3 billion in 2013 to zero in 2018.)

10. Section 1117 of the Housing and Economic Recovery Act of 2008 gave the Treasury temporary authority to enter into agreements with Fannie Mae and Freddie Mac to purchase any obligations or other securities issued by them on terms and conditions and in such amounts as the Treasury may deem necessary.

11. Technically, the sweep is the change to the GSEs' net worth; it reflects their net income plus some unrealized gains or losses on their investments in mortgage securities that are not recorded as income.



The 2012 amendment also voided the Treasury's right to charge the GSEs a quarterly commitment fee. That fee, which was to be based on the market value of the federal government's guarantee, was never imposed because it would have caused the GSEs to make larger draws on the federal backstop when the GSEs were losing money. The Treasury has argued that the third amendment was necessary to end the GSEs' practice of drawing on the Treasury's financial support to pay dividends to the Treasury—a practice that could impair the Treasury's financial backstop to the point that it would no longer sufficiently cover the GSEs' activities.<sup>12</sup>

In addition, the latest amendment precludes the GSEs from using retained earnings to increase their capital and is therefore consistent with the Administration's plan to wind down Fannie Mae and Freddie Mac.<sup>13</sup> Neither GSE reports a substantial amount of capital reserves on its current balance sheet, and under current law, by 2018 neither will hold any such reserves. After Fannie Mae and Freddie Mac made their dividend payments of nearly

\$4 billion to the Treasury in September 2016, their capital reserves declined to \$1.2 billion each—the maximum amount of reserves that the GSEs were allowed to hold.

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12. Before the third amendment, the GSEs were required to pay the Treasury the 10 percent fixed-rate dividend payment on the shares of senior preferred stock it held regardless of whether they recorded profits. Fannie Mae paid quarterly dividends of \$2.9 billion to the Treasury on the \$117.1 billion of senior preferred stock that the government held, and Freddie Mac paid quarterly dividends of about \$1.8 billion on the \$72.3 billion of senior preferred stock held by the Treasury. See Department of the Treasury, "Treasury Department Announces Further Steps to Expedite Wind Down of Fannie Mae and Freddie Mac" (press release, August 17, 2012), <http://go.usa.gov/xKz4S>; and statement of Edward J. DeMarco, Federal Housing Finance Agency Acting Director, "Changes to Fannie Mae and Freddie Mac Preferred Stock Purchase Agreements" (press release, August 17, 2012), <http://go.usa.gov/xKz2g>.
  13. Department of the Treasury and Department of Housing and Urban Development, *Reforming America's Housing Finance Market: A Report to Congress* (February 2011), [www.treasury.gov/initiatives/Pages/housing.aspx](http://www.treasury.gov/initiatives/Pages/housing.aspx).

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## About This Document

This report was prepared at the request of the Chairman of the Senate Committee on Banking, Housing, and Urban Affairs. In keeping with the Congressional Budget Office's mandate to provide objective, impartial analysis, the report makes no recommendations.

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