CONGRESSIONAL BUDGET OFFICE
U.S. Congress
Washington, DC 20515

Phillip L. Swagel, Director

December 13, 2024

Honorable Patrick McHenry
Chairman
Committee on Financial Services
U.S. House of Representatives
Washington, DC 20515

Re: An Update to CBO's Analysis of the Effects of Recapitalizing Fannie Mae and Freddie Mac Through Administrative Actions

Dear Mr. Chairman:

This letter responds to your request of September 10, 2024, that the Congressional Budget Office update its 2020 report titled *Effects of Recapitalizing Fannie Mae and Freddie Mac Through Administrative Actions*. That report analyzed illustrative options for using administrative (rather than legislative) actions to rebuild the capital reserves of Fannie Mae and Freddie Mac, government-sponsored enterprises (GSEs) that play a major role in the housing finance system and that have been in federal conservatorships since 2008.[1] In that report, CBO examined options for recapitalizing the GSEs by allowing them to retain all of their profits for an initial period, rather than paying some of those profits to the Treasury. After that initial period, the GSEs would sell new common stock to investors to replace the Treasury's ownership stake.

This letter updates that earlier analysis, describing how the GSEs' current financial conditions differ from the conditions underlying the estimates in the 2020 report and how those differences affect scenarios for recapitalization. CBO's updated analysis concludes that the potential value of the GSEs to investors is greater now than it was at the time of the previous analysis, resulting in more scenarios in which the GSEs could be

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[1] Congressional Budget Office, *Effects of Recapitalizing Fannie Mae and Freddie Mac Through Administrative Actions* (August 2020), www.cbo.gov/publication/56496.

recapitalized through the sale of common stock and could repay the Treasury for its stake in the enterprises.

CBO's 2020 Analysis

In its 2020 report, CBO examined options under which the GSEs would retain their annual earnings for either three or five years and then sell new shares of common stock to investors. For that analysis, CBO created 250 scenarios using different combinations of estimates for factors such as the recapitalization period (three or five years), the capital requirements for the GSEs, the growth rates of the GSEs' earnings and assets over the recapitalization period, and how potential shareholders would estimate the value of the GSEs.

CBO found that, in some scenarios, the GSEs would raise enough from the sale of common stock to achieve three goals: meeting their capital requirements, redeeming their outstanding senior and junior preferred shares, and providing the Treasury with some value for the warrants it received from the GSEs. (Those warrants give the Treasury the right, though not the obligation, to buy common stock in the GSEs for a nominal price in the future. The warrants expire on September 7, 2028.)

In other scenarios—such as with higher capital requirements and lower growth rates for the GSEs' earnings—the estimated proceeds from the common-stock sale would not be sufficient to achieve all three of those goals. As a result, the Treasury and other shareholders might have to accept a reduction in the value of their stakes in the GSEs. That situation could cause the GSEs' regulator, the Federal Housing Finance Agency (FHFA), to put the GSEs in receivership (which would involve liquidating their assets or transferring the assets to other entities).

Updated Results

In its updated analysis, CBO retained the three- and five-year recapitalization periods used in the report, but it began those periods on January 1, 2024, instead of on January 1, 2020, as in the report.

In general, the updated illustrative options for recapitalizing Fannie Mae and Freddie Mac show the GSEs having a higher value to investors than they did in the previous analysis, making it easier to recapitalize them through the sale of common stock and to repay the Treasury for its support of the enterprises. Under current conditions, nearly 60 percent of CBO's 250 recapitalization scenarios would raise enough funds to allow the GSEs to fully repay the Treasury for its roughly $190 billion in outstanding

preferred shares issued before the GSEs' conservatorships (which CBO rounded to $190 billion for this analysis). In the 2020 analysis, by comparison, that outcome occurred in only 12 percent of scenarios.

At the end of December 2019, the starting point for the previous analysis, Fannie Mae and Freddie Mac reported a combined total of $24 billion in capital, equal to 0.4 percent of their $5.7 trillion in total assets.[2] At the end of December 2023, the starting point for this update, the GSEs reported a combined total of $125 billion in capital, equal to 1.6 percent of their $7.6 trillion in total assets.[3]

The higher initial amount of capital at the end of 2023—along with higher initial combined annual earnings ($26 billion in this update, based on the average for 2020 to 2023, versus $20 billion in the 2020 report)—increases the number of scenarios in which the GSEs would be able to raise enough funds to meet their capital requirements, repurchase all of the outstanding preferred shares issued before their conservatorships, compensate the Treasury for its stake in the GSEs, and become privately owned companies. Those improvements in the GSEs' finances also decrease the number of scenarios in which the enterprises would not be able to raise enough to meet their capital requirements, reducing the likelihood that FHFA and the Treasury would need to explore other options, such as putting the GSEs in receivership.

The updated analysis does not change CBO's assessment of the potential budgetary treatment of recapitalization described in the 2020 report. Nor does the update change other considerations of recapitalization discussed in that report, such as the potential status of the GSEs as systemically significant institutions, the effects on mortgage markets, and the effects on other government institutions that guarantee mortgages or mortgage-backed securities.

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[2] The capital figures used in this analysis represent the total amounts of equity disclosed on the GSEs' consolidated balance sheets. Both GSEs release additional disclosures that calculate statutory and regulatory capital. See Fannie Mae, "Capital Disclosures" (accessed September 9, 2024), https://tinyurl.com/3f7t2uy6; and Freddie Mac, "ERCF Public Disclosure" (accessed September 9, 2024), https://tinyurl.com/ec3czk67. In those disclosures, the GSEs deduct the value of their senior preferred shares because of the cumulative nature of the dividends associated with those shares.

[3] This update starts at the beginning of calendar year 2024 to be consistent with the 2020 report, which used the beginning of calendar year 2020 as the starting point. The GSEs' more recent quarterly financial statements (for the second and third quarters of 2024) show assets, income, and capital that are consistent with the estimated growth rates for 2024 used in this update.

Common-Stock Offering in 2027. Under this option, Fannie Mae and Freddie Mac would keep 100 percent of their earnings for three years (2024 to 2026) and try to raise the remaining capital they would need by selling common stock to investors at the beginning of 2027. Completing the GSEs' recapitalization in 2027 would place more private capital (that of investors) at risk sooner than would occur with a five-year recapitalization period. However, this option would give the GSEs less time to raise capital through retained earnings, leaving a larger share to be raised through the sale of common stock.

CBO analyzed the results of this option under multiple scenarios with different combinations of values for some of the key parameters in its recapitalization model. For example, if the GSEs had a capital requirement equal to 4.5 percent of the total value of their assets (unadjusted for the risk of those assets), an expected return on capital of 10 percent, and earnings growth of 4 percent a year—values consistent with FHFA's risk-based capital requirements, investors' required return on the GSEs' shares, and the GSEs' annual earnings—the GSEs would be able to recapitalize using three years of retained earnings and a common-stock sale while reimbursing the federal government for a portion of its support for the enterprises. On the basis of their projected assets at the beginning of 2027, the GSEs would need about $370 billion in capital to meet the 4.5 percent capital requirement (see Table 1 on page 9, Scenario 2). By the end of 2026, they would have accumulated about $208 billion in capital (the $125 billion on hand at the end of December 2023 plus $83 billion from three years of retained earnings). As a result, the GSEs would need to cover a shortfall of approximately $162 billion through the sale of common stock.

If investors required a 10 percent return on their capital, they would value the GSEs' combined equity at $368 billion, CBO estimates.[4] That equity valuation would be large enough to cover the expected capital shortfall of $162 billion and the roughly $35 billion in outstanding junior preferred shares held by investors (which CBO rounded to $35 billion for this analysis). The GSEs would then have about $171 billion left to pay the

[4] The value of the GSEs' equity to investors is estimated using a two-stage dividend discount model that is based on the GSEs' annual earnings at the end of the recapitalization period, the annual growth rate of their earnings, and a single return on capital. The model is described in Congressional Budget Office, *Effects of Recapitalizing Fannie Mae and Freddie Mac Through Administrative Actions* (August 2020), p. 13, www.cbo.gov/publication/56496.

Treasury toward its $190 billion in outstanding senior preferred shares.[5] In that scenario, the Treasury could exercise its warrants for common stock, but it would receive very little value for them, CBO estimates, because of the projected dilution of existing shares.

Using the lowest values from the ranges in CBO's analysis for the GSEs' capital requirement (3 percent) and investors' return on capital (8 percent) and the highest annual growth rate for the GSEs' earnings after recapitalization (8 percent) would reduce the amount of the GSEs' capital requirement to $247 billion at the end of 2026 and increase their combined equity value to $521 billion (see Table 1, Scenario 1). In that scenario, recapitalization and repayment of the Treasury's full stake would be much more feasible. CBO estimates that the Treasury would not only receive the full $190 billion for its senior preferred shares but would also receive $206 billion from exercising its warrants.

Conversely, using the highest values from the ranges for the GSEs' capital requirement (6 percent) and investors' required return (12 percent) and the lowest value for annual earnings growth (zero) would make recapitalization and repayment difficult even with three years of retained earnings. In that scenario, the GSEs would have a capital shortfall of about $285 billion at the time of the common-stock sale and a total equity value of $292 billion, CBO estimates (see Table 1, Scenario 3). As a result, the GSEs could raise enough from the sale to cover their capital shortfall but would not have enough to fully repay investors' junior preferred shares or to pay the Treasury for any of its outstanding senior preferred shares.

Common-Stock Offering in 2029. Under the second option, Fannie Mae and Freddie Mac would retain 100 percent of their earnings for five years (2024 to 2028) and try to raise the remaining capital they would need by selling common stock to investors at the beginning of 2029. Completing the GSEs' recapitalization in 2029 would give them more time to accumulate capital through retained earnings, decreasing the capital shortfall they would need to fill through the sale of common stock. However, this option would leave the GSEs in conservatorship for a longer period with smaller

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[5] CBO's model incorporates the judgment that in scenarios in which the GSEs' common-stock sale did not raise enough funds to redeem the full face value of both the senior preferred and junior preferred shares, the Treasury would take a reduction in the value of its senior preferred stake before requiring junior preferred shareholders to do so. That outcome would be inconsistent with the priority of interest between junior and senior preferred shares. But it recognizes that changing the GSEs' commitments to junior preferred shareholders would be difficult outside a receivership scenario, in which the Treasury, as owner of the senior preferred shares, also owned the GSEs' common stock (through its warrants).

capital cushions than under the first option, increasing the possibility that the government would bear the costs of a crisis at either GSE.

In a scenario with a capital requirement of 4.5 percent, an expected return on capital of 10 percent, and earnings growth of 4 percent a year, the GSEs would need about $400 billion in capital, based on their projected assets at the beginning of 2029 (see Table 2 on page 10, Scenario 2). In that scenario, they would have accumulated about $273 billion in capital by the end of 2028, resulting in a capital shortfall of $127 billion. Their estimated equity value of $398 billion would be large enough to cover that capital shortfall and the $35 billion in outstanding junior preferred shares. As a result, CBO estimates, the Treasury would not only receive the full $190 billion for its senior preferred shares but would also receive $37 billion from exercising its warrants.

Using the lowest values from the ranges for the GSEs' capital requirement (3 percent) and investors' return on capital (8 percent) and the highest annual growth rate for the GSEs' earnings after recapitalization (8 percent) would reduce the amount of the GSEs' capital requirement to $267 billion at the end of 2028 and increase their combined equity value to $563 billion (see Table 2, Scenario 1). CBO estimates that in that scenario, the Treasury would not only receive the full $190 billion for its senior preferred shares but would also receive $271 billion from exercising its warrants.

Using the highest values from the ranges for the GSEs' capital requirement (6 percent) and investors' required return (12 percent) and the lowest value for annual earnings growth (zero) would make recapitalization and repayment difficult even with five years of retained earnings. In that scenario, the GSEs would have a capital shortfall of about $260 billion at the time of the common-stock sale and a total equity value of $316 billion, CBO estimates (see Table 2, Scenario 3). As a result, the GSEs could raise enough from the sale to cover their capital shortfall and fully repay the junior preferred shares, leaving about $21 billion to pay the Treasury for its outstanding senior preferred shares. In that scenario, the Treasury could exercise its warrants for common stock, but it would receive very little value for them, CBO estimates, because of the projected dilution of existing shares.

Comparison of Input Values Used in the Current and Previous Analyses

In general, the GSEs' combined assets, annual income, and capital at the start of the recapitalization period were larger at the beginning of calendar year 2024 than they were at the beginning of 2020 or than CBO projected they would be at the beginning of 2024 in the five-year recapitalization

scenarios analyzed in the 2020 report (see Table 3 on page 11). Those differences occurred because the GSEs' assets grew at a faster average annual rate from 2020 to 2023 than the projected 4 percent rate used in the previous analysis. That asset growth and other factors helped the GSEs' annual income grow more rapidly during that period than the 4 percent rate used in that analysis. With larger annual income, the GSEs accumulated more capital from 2020 to 2023 than CBO estimated in the 2020 report.

On the basis of those outcomes, CBO updated the values used in this analysis for the GSEs' combined assets and annual earnings before recapitalization (see Table 4 on page 12). Values for the other variables in CBO's recapitalization model—including the ranges used to assess the GSEs' capital requirement as a percentage of total assets, investors' required annual rate of return on capital invested in the GSEs, and the annual growth rates of the GSEs' earnings before and after recapitalization—were left unchanged from the 2020 report. FHFA announced revised capital requirements for the GSEs in February 2022 that changed how the risk of certain assets is measured and how the adequacy of capital is determined.[6] In CBO's assessment, those changes will not result in a capital requirement that falls outside the range used in this analysis (3 percent to 6 percent of the total value of assets, unadjusted for their risk).

The GSEs' assets and income outpaced the growth rate used in the 2020 analysis partly because home prices rose more in recent years than CBO projected in 2020. Higher home prices boosted the principal balance of mortgages guaranteed by the GSEs as part of their mortgage-backed securities (the largest share of the GSEs' assets), which drove asset growth over the 2020–2023 period. Higher home prices also increased the GSEs' income by allowing them to reduce the amount of future credit losses expected on their mortgage guarantees. (Those reductions show up on the GSEs' financial statements as increases in net income.)

In addition, interest rates were higher during the 2020–2023 period than CBO had projected. Higher interest rates reduced the early repayment of mortgages included in the GSEs' mortgage-backed securities, which in turn increased the GSEs' assets and the income earned on them. Those increases were partly offset by fewer acquisitions of new mortgages—particularly mortgages used to refinance existing loans—which reduced the growth of the GSEs' assets.

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[6] Federal Housing Finance Agency, "Enterprise Capital Requirements" (accessed November 11, 2024), https://tinyurl.com/retktk94.

Higher interest rates also dampened the growth of the GSEs' income, mainly by having a negative impact on credit costs, which generally rise when mortgage interest rates do. CBO anticipates that during the recapitalization periods included in this analysis, the growth rates of income and assets will return to their historical longer-term averages.

In CBO's assessment, changes in some other aspects of the GSEs' business that have occurred since the 2020 report—including adjustments in the GSEs' approach to setting fees for their guarantees of single-family mortgages—do not necessitate changing the growth rates used in this analysis for assets or earnings during or after the recapitalization period.[7]

I hope this information is helpful to you.

Sincerely,

Phillip L. Swagel
Director

cc: Honorable Maxine Waters
Ranking Member

Honorable Sherrod Brown
Chairman
Senate Committee on Banking, Housing, and Urban Affairs

Honorable Tim Scott
Ranking Member

Honorable Jodey Arrington
Chairman
House Committee on the Budget

Honorable Brendan F. Boyle
Ranking Member

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[7] See Federal Housing Finance Agency, "FHFA Announces Updates to the Enterprises' Single-Family Pricing Framework" (press release, January 19, 2023), https://tinyurl.com/yphnc94c, and "FHFA Announces Rescission of Enterprise Upfront Fees Based on Debt-to-Income (DTI) Ratio" (press release, May 10, 2023), https://tinyurl.com/2heujvp7.

Table 1.

Scenarios for Recapitalization With a Common-Stock Offering at the Beginning of 2027

	Scenario 1	Scenario 2	Scenario 3
	Parameters of the scenario		
Earnings retention period (years)	3	3	3
Capital requirement (as a percentage of unadjusted assets)	3	4.5	6
Investors' required return on capital (percent)	8	10	12
Annual growth rate of earnings for first five years after recapitalization (percent)	8	4	0
	Results of the scenario (billions of dollars)		
Amount of capital required	247	370	494
Minus: capital on hand at the end of 2026	208	208	208
Equals: capital shortfall at the end of 2026	39	162	285
GSEs' total equity value (amount available from sale of common stock)	521	368	292
Amount available after covering capital shortfall	482	206	7
Amount of the Treasury's senior preferred shares redeemed (total face value of $190 billion)	190	171	0
Amount of investors' junior preferred shares redeemed (total face value of $35 billion)	35	35	7
Value of the Treasury's warrants[a]	206	*	*

Data source: Congressional Budget Office.

Scenario 1 uses the lowest values from CBO's ranges of estimates for the GSEs' capital requirement and investors' required return on capital and the highest value for the growth rate of the GSEs' earnings after recapitalization (see Table 4).

Scenario 2 uses values at the center of CBO's ranges for all three variables.

Scenario 3 uses the highest values from CBO's ranges for the GSEs' capital requirement and investors' required return on capital and the lowest value for the growth rate of the GSEs' earnings after recapitalization.

Numbers may not add up to totals because of rounding.

GSEs = government-sponsored enterprises (specifically, Fannie Mae and Freddie Mac); * = between zero and $0.1 billion.

a. The Treasury has warrants from Fannie Mae and Freddie Mac that give it the right (though not the obligation) to buy common stock in each of the GSEs for a nominal amount. (The warrants expire on September 7, 2028.) If the Treasury exercised all of its warrants, it would own 79.9 percent of the GSEs' common shares issued before the new stock offering. As a result, the Treasury would be in line to receive 79.9 percent of the equity value available to existing holders of common shares after the GSEs made up their capital shortfall and redeemed their senior and junior preferred shares.

Table 2.

Scenarios for Recapitalization With a Common-Stock Offering at the Beginning of 2029

	Scenario 1	Scenario 2	Scenario 3
	Parameters of the scenario		
Earnings retention period (years)	5	5	5
Capital requirement (as a percentage of unadjusted assets)	3	4.5	6
Investors' required return on capital (percent)	8	10	12
Annual growth rate of earnings for first five years after recapitalization (percent)	8	4	0
	Results of the scenario (billions of dollars)		
Amount of capital required	267	400	534
Minus: capital on hand at the end of 2028	273	273	273
Equals: capital shortfall at the end of 2028	n.a.	127	260
GSEs' total equity value (amount available from sale of common stock)	563	398	316
Amount available after covering capital shortfall	563	271	56
Amount of the Treasury's senior preferred shares redeemed (total face value of $190 billion)	190	190	21
Amount of investors' junior preferred shares redeemed (total face value of $35 billion)	35	35	35
Value of the Treasury's warrants[a]	271	37	*

Data source: Congressional Budget Office.

Scenario 1 uses the lowest values from CBO's ranges of estimates for the GSEs' capital requirement and investors' required return on capital and the highest value for the growth rate of the GSEs' earnings after recapitalization (see Table 4).

Scenario 2 uses values at the center of CBO's ranges for all three variables.

Scenario 3 uses the highest values from CBO's ranges for the GSEs' capital requirement and investors' required return on capital and the lowest value for the growth rate of the GSEs' earnings after recapitalization.

Numbers may not add up to totals because of rounding.

GSEs = government-sponsored enterprises (specifically, Fannie Mae and Freddie Mac); n.a. = not applicable; * = between zero and $0.1 billion.

a. The Treasury has warrants from Fannie Mae and Freddie Mac that give it the right (though not the obligation) to buy common stock in each of the GSEs for a nominal amount. (The warrants expire on September 7, 2028.) If the Treasury exercised all of its warrants, it would own 79.9 percent of the GSEs' common shares issued before the new stock offering. As a result, the Treasury would be in line to receive 79.9 percent of the equity value available to existing holders of common shares after the GSEs made up their capital shortfall and redeemed their senior and junior preferred shares.

Table 3.

Comparison of Key Input Amounts in CBO's 2020 and 2024 Analyses

Billions of dollars

	2020 report: starting value in 2020	2020 report: estimated value at the end of 2023	2024 update: starting value in 2024	Comments
GSEs' combined assets	5,700	6,668	7,606	Actual asset growth in the 2020–2023 period exceeded the estimate of 4 percent annual growth during recapitalization used in the 2020 report.
GSEs' combined annual earnings	20	22	26	Actual earnings growth in the 2020–2023 period exceeded the estimate of 4 percent annual growth during recapitalization used in the 2020 report.
GSEs' combined capital	24	102	125	Higher-than-expected earnings in the 2020–2023 period increased the GSEs' capital accumulation above the amount estimated in the 2020 report. In that report, CBO also estimated that combined earnings in 2020 would be reduced from $20 billion to $10 billion because of the coronavirus pandemic. Actual combined earnings in 2020 were about $19 billion.

Data source: Congressional Budget Office.

The 2020 report is Congressional Budget Office, *Effects of Recapitalizing Fannie Mae and Freddie Mac Through Administrative Actions* (August 2020), www.cbo.gov/publication/56496.

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

Table 4.

Values CBO Used in Modeling Scenarios for Recapitalization

	Type of value	Values used in the 2020 report	Values used in the 2024 update
GSEs' combined assets before recapitalization	Point estimate	• $5.7 trillion as of December 31, 2019 • 4 percent growth per year during the recapitalization period	• $7.6 trillion as of December 31, 2023 • 4 percent growth per year during the recapitalization period
GSEs' combined annual earnings before recapitalization	Point estimate	• $20 billion in 2019 • Reduced to $10 billion in 2020 because of the coronavirus pandemic • 4 percent growth per year (based on the amount of 2019 earnings) during the recapitalization period	• $26 billion in 2024 • 4 percent growth per year (based on the amount of 2024 earnings) during the recapitalization period
Senior preferred shares in the GSEs	Point estimate	• $190 billion outstanding • No dividends paid before the sale of new common shares • Retired, to the extent possible, as part of the sale of new common shares	• Same as in the 2020 report
Junior preferred shares in the GSEs	Point estimate	• $35 billion outstanding • No dividends paid before the sale of new common shares • Retired, to the extent possible, as part of the sale of new common shares	• Same as in the 2020 report
Existing common shares in the GSEs	Point estimate	• 1.8 billion shares outstanding in 2020 • 7.2 billion additional shares outstanding with the exercise of the Treasury's warrants, to the extent possible, as part of the sale of new common shares • No dividends paid before the sale of new common shares	• Same as in the 2020 report
Cost of the GSEs' debt	Point estimate	• 3 percent per year	• Same as in the 2020 report
GSEs' capital requirement as a percentage of total assets (unadjusted for assets' risk)	Range	• 3 percent, 4 percent, 4.5 percent, 5 percent, and 6 percent	• Same as in the 2020 report
Investors' required annual rate of return on capital invested in the GSEs	Range	• 8 percent, 9 percent, 10 percent, 11 percent, and 12 percent	• Same as in the 2020 report
Annual growth of the GSEs' earnings after recapitalization	Range	• Zero, 2 percent, 4 percent, 6 percent, and 8 percent • Earnings grow at that annual rate for five years after recapitalization • After five years, earnings grow at an annual rate of 3 percent	• Same as in the 2020 report

Data source: Congressional Budget Office.

The 2020 report is Congressional Budget Office, *Effects of Recapitalizing Fannie Mae and Freddie Mac Through Administrative Actions* (August 2020), www.cbo.gov/publication/56496.

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