WRITTEN STATEMENT OF MITCHELL DELK

SENIOR VICE PRESIDENT

FREDDIE MAC

BEFORE THE SUBCOMMITTEE ON CAPITAL MARKETS,

INSURANCE

AND GOVERNMENT SPONSORED ENTERPRISES

OF THE

COMMITTEE ON FINANCIAL SERVICES

U.S. HOUSE OF REPRESENTATIVES

July 11, 2001

Good afternoon Chairman Baker, Congressman Kanjorski and Members of the Subcommittee. It is a pleasure to appear before this committee. I am Mitchell Delk, Senior Vice President of Government Relations at Freddie Mac.

EXECUTIVE SUMMARY

Freddie Mac plays a vital role in financing homeownership and rental housing for the nation's families. Mortgage funds are available whenever and wherever they are needed. Mortgage rates are lower, saving homeowners thousands of dollars in interest payments. Thirty-year fixed-rate mortgages are plentiful, protecting families from unexpected interest-rate increases. In addition, the availability of low-downpayment loans has helped open the door of homeownership to more low- and moderate-income families.

The benefits Freddie Mac brings far outweigh the value we derive from our Congressional charter. In a recent report, former Office of Management and Budget Director Dr. James Miller and Dr. James Pearce estimated the total interest-rate savings to America's families resulting from the activities of Freddie Mac and Fannie Mae to be between $8 billion and $23 billion each year, compared to an annual funding advantage of between $2.3 billion to $7.0 billion. They conclude: "Thus, even using the lowest estimate of consumer benefits and the highest estimate of the funding advantage in our range of estimates, the value of consumer interest-cost savings resulting from Freddie Mac and Fannie Mae's activities significantly exceeds the highest estimate of their funding advantage."[1]

Freddie Mac's ability to continue to provide these benefits rests on our financial strength. As a result of our superior risk management capabilities, strong capital position and state-of-the-art information disclosure, Freddie Mac is unquestionably a safe and sound financial institution. Effective and credible regulatory oversight is an essential complement to our already strong financial position. In this regard, we believe that the regulatory structure set forth by the Federal Housing Enterprises Financial Safety and Soundness Act (the GSE Act) is fundamentally sound. It ties capital to risk; provides a comprehensive set of enforcement authorities; provides oversight without unnecessary intrusion and enables the enterprises to respond aggressively to market developments with innovations to meet their mission.

In addition to an appropriate regulatory structure, it is critical that the regulator have the confidence of Congress, the public and investors. Mr. Chairman, you have put the question of the location of Freddie Mac's safety-and-soundness regulation before the Subcommittee. Freddie Mac is committed to continuing our constructive working relationship with the Office of Federal Housing Enterprise Oversight (OFHEO) and to providing any input and assistance that you believe would assist you in these deliberations.

[1] James E. Pearce and James C. Miller III, "Freddie Mac and Fannie Mae: Their Funding Advantage and Benefits to Consumers," at 29 (2001).

I. U.S. HOUSING FINANCE SYSTEM IS THE WORLD'S BEST

Freddie Mac is in a great business: financing homes in this nation. People in America almost universally aspire to owning a home of their own. The nation's homeownership rate reached a record high of 67.4 percent in 2000. Over the past six years, the homeownership rate has risen across all income, racial and ethnic groups, with minority families experiencing the fastest rate of growth.[2]

For most families, their home is their most valuable asset and greatest source of financial security. Children of homeowning families do better in school and have fewer behavioral problems.[3] Homeownership strengthens neighborhoods and contributes to a sense of belonging and community.

The housing and mortgage markets also play a critical role in stabilizing our economy. Throughout 2001, the nation's robust housing market has defied the softening evident in other sectors of the economy. As noted by Harvard University's Joint Center for Housing Studies, this year's "flurry" of mortgage refinancing has "offset the drag on economic growth from rising energy prices and falling stock prices."[4]

Because of the importance of housing and homeownership in people's lives, the strength of our communities and in the nation's economy, it is critical that the nation have an uninterrupted source of mortgage funds on a grand scale.

That's exactly what we have in this country. There were a trillion dollars in mortgages originated last year alone, with $1.5 trillion expected for 2001. Based on current estimates of population growth and household formation, America's families will need an additional $6 trillion to finance their homes over the next decade.

Fortunately, America's housing finance system is up to the monumental task of opening the door of homeownership to millions of new homebuying families. Our system works so well, we tend to take it for granted. Many of the benefits Freddie Mac brings to America's families are described below:

Constant availability. There is never a shortage of mortgage money. Freddie Mac's high-quality, liquid mortgage and debt securities attract global investors to finance America's housing. A diversified investor base makes the housing finance system highly resilient and stable. When other markets face disruption – as they did during the global financial turmoil in the fall of 1998 – Freddie Mac ensures a steady supply of low-cost mortgage funds.

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[2] Joint Center for Housing Studies of Harvard University, *The State of the Nation's Housing (2001)*, at 1. The paper is available on the Joint Center's website (http://www.gsd.harvard.edu/center).

[3] Donald Haurin, Toby Parcel and R. Jean Haurin, "The Impact of Homeownership on Child Outcomes," Ohio State University (2001). The paper is available on the Homeownership Alliance website (http://www.homeownershipalliance.com).

[4] Joint Center for Housing Studies of Harvard University at 5.

Low cost. By linking local communities with global investors, Freddie Mac enables homebuyers to compete for funds in the capital markets alongside the largest corporations. Perhaps the best evidence of how we save consumers money is in the weekly real estate section of major newspapers. For example, in its Saturday Real Estate section, *The Washington Post* provides two sets of mortgage interest rates: those for conforming mortgages, which are eligible for Freddie Mac purchase (currently up to $275,000 for a single-family home), and those for higher-balance jumbo loans. Invariably, rates on conforming mortgages are lower than those on jumbo loans by between 25 and 40 basis points.[5] Furthermore, Freddie Mac's activities lower mortgage interest rates on *all* conforming loans, as well as on jumbo loans, not simply the loans we purchase. Regardless of whether Freddie Mac purchases a conforming loan or it is held in portfolio by a bank or a credit union, mortgage rates are lower for all borrowers.

Expanded homeowning opportunities for low- income and minority families. Lower mortgage interest rates strongly impact homeownership. For example, a 0.5 percent reduction in fixed-rate mortgage rates would increase the U.S. homeownership rate for low- and moderate-income and minority families by as much as 3 percent.[6]

In 2000, fully 58 percent of Freddie Mac's business financed housing for nearly a million families with very- low-, low- or moderate- incomes or who live in underserved areas. Our purchases funded mortgages for more than 206,000 minority families, comprising 13.6 percent of our total mortgage purchases in 2000. Apart from Freddie Mac and Fannie Mae, no other shareholder-owned financial institution provides this level of support to expanding opportunities for these families.

Uniformity. Freddie Mac purchases mortgages in every community in the country. As a result, a borrower in Baton Rouge pays the same for a mortgage as a borrower in Wilkes-Barre. This stands in sharp contrast to 1970 – the year Freddie Mac was established – when mortgage interest rates differed by as much as one and a half percentage points across the country.

Product choice. America's families choose from a broad array of mortgage products, including the 30-year fixed-rate mortgage with a low downpayment – without the need for government insurance. In many other countries, this type of mortgage is simply not available.

Innovation. From the development of the mortgage securities market in the 1970s to the development of automated underwriting in the 1990s, Freddie Mac has been at the forefront of innovation in the mortgage market. Borrowers are the direct beneficiaries of Freddie Mac's innovation.

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[5] For example, on July 7, 2001, *The Washington Post* showed an average 26 basis point jumbo-conforming spread on 30-year fixed-rate mortgages and a 36 basis point spread on 15-year fixed-rate mortgages.

[6] R. Quecia, G. McCarthy and S. Wachter, "The Impacts of Affordable Lending Efforts on Homeownership Rates," (June 2000).

In 1995, Freddie Mac introduced automated underwriting to the market with our Loan Prospector® automated underwriting service. Loan Prospector has revolutionized the mortgage origination process, reducing the time and expense of getting a loan. Automated underwriting also brings greater objectivity and fairness to lending decisions. Every piece of information is evaluated the same way for every borrower, every time, with an accuracy no human underwriter can match. This high degree of accuracy has led to the development of new products that would have been deemed too risky a few years ago. Harvard's Joint Center for Housing Studies concludes that these products enable "more income-constrained and cash-strapped borrowers at the margin to qualify for mortgage loans."[7] Furthermore, an article in the latest issue of *Real Estate Economics* stated that Freddie Mac's activities have helped reduce mortgage origination costs by more than $2 billion.[8]

High standards. By bringing competition, standardization and accountability to the mortgage market, Freddie Mac promotes responsible lending. We have taken a leadership role in combating predatory lending practices. For example, in 2000 Freddie Mac became the first major mortgage market participant to ban the purchase of mortgages carrying single-premium credit insurance. As a result of our leadership, many financial institutions have stopped offering this high-priced product, which has been associated with the abusive practice of equity stripping. In addition, Freddie Mac's highly effective Don't Borrow Trouble campaign is raising public awareness and giving consumers the information they need to protect themselves from abusive lending practices. Following the initial launch in 12 cities, we recently partnered with the U.S. Conference of Mayors to bring this campaign to cities across the U.S.

II. CONSUMER BENEFITS FAR OUTWEIGH CHARTER ADVANTAGES

These public benefits flow directly from the charter and efficiencies of Freddie Mac, as Congress intended. In 1970, Congress created Freddie Mac and authorized Fannie Mae to create a secondary mortgage market for conventional mortgages.

The Congressional charters contain restrictions to ensure that the two shareholder-owned corporations maintain a constant and singular focus on financing America's housing. In addition, the charters provide tools to assist Freddie Mac and Fannie Mae in providing a stable supply of low-cost mortgage funds. With these tools and operating under the discipline of private-market incentives, Freddie Mac has proven our ability to reduce consumer costs, champion innovation and manage the risk of our business effectively. The combination of Congressional charter, public purpose and private capital uniquely positions Freddie Mac and Fannie Mae as linchpins of our nation's vibrant and resilient housing finance system.

The benefits Freddie Mac brings far outweigh the value we derive from our Congressional charter. In a recent report, former Office of Management and Budget

[7] Joint Center for Housing Studies of Harvard University, *State of the Nation's Housing (1999)*, at 4.
[8] Steven Todd, "The Effects of Securitization on Consumer Mortgage Interest," 29 *Real Estate Economics* 1, 29-55(2001).

Director Dr. James Miller and Dr. James Pearce estimate that as a result of Freddie Mac's and Fannie Mae's activities, America's families save between $8 billion and $23 billion in mortgage interest each year. In contrast, they estimate the funding advantage resulting from our charter ranges between $2.3 billion and $7.0 billion. They conclude: "Thus, even using the lowest estimate of consumer benefits and the highest estimate of the funding advantage in our range of estimates, the value of consumer interest-cost savings resulting from Freddie Mac and Fannie Mae's activities significantly exceeds the highest estimate of their funding advantage."[9] This analysis is included at Appendix A.

In stark contrast to the body of research documenting the significant benefits Freddie Mac brings is the May 2001 report by the Congressional Budget Office (CBO) entitled *Federal Subsidies and the Housing GSEs*. The report updates CBO's 1996 study, *Assessing the Public Costs and Benefits of Fannie Mae and Freddie Mac*. As with the 1996 report, CBO's new report is a flawed academic exercise. CBO's use of the term "subsidy" gives the impression that Freddie Mac receives a direct outlay of funds from the federal Treasury. In fact, the corporation has never received a cent of federal money, and is one of the nation's largest payers of federal income tax.

Flaws of CBO's 1996 Report

CBO's 1996 study estimated a total annual "subsidy" of $6.5 billion, compared to total benefits of $4.4 billion. The difference of $2.1 billion was attributed to a "funding subsidy retained."[10] In the 2001 report, however, CBO concedes having made significant errors that overstated the funding advantage in its 1996 report – in the amount of $2.1 billion.[11] This is the exact amount CBO accused Freddie Mac and Fannie Mae of failing to pass on to borrowers.

The 1996 report treated all Freddie Mac and Fannie Mae debt as long-term debt, ignoring the lower funding advantage on short-term debt. In addition, it incorrectly measured the funding advantage on long-term debt and mortgage-backed securities.[12]

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[9] James E. Pearce and James C. Miller III, "Freddie Mac and Fannie Mae: Their Funding Advantage and Benefits to Consumers," at 29 (2001).

[10] Congressional Budget Office, "Assessing the Public Costs and Benefits of Fannie Mae and Freddie Mac," at xi (May 1996) (the "1996 CBO Report").

[11] Congressional Budget Office, "Federal Subsidies and the Housing GSEs at Table B-1 (May 2001) (the "2001 CBO Report"). Table B-1 updates CBO's subsidy estimates using the 1996 methodology. Using the 1996 methodology, CBO estimated that the "Total Annual Subsidy" during 1995 to Fannie Mae and Freddie Mac was $6.5 billion. In Table B-1, based on new analysis that concedes serious errors in the 1996 study's methods and findings, the CBO presents new figures that make a significant downward adjustment of $2.1 billion in their funding advantage calculation. This is the same amount as the purported "funding subsidy retained" that CBO claimed to exist in its 1996 study. Two significant errors that CBO corrected were the failure of the 1996 study to account for the much smaller funding advantage that Freddie Mac has on its short-term debt and the 1996 study's substantial overestimate of the funding advantage on callable debt.

[12] James E. Pearce and James C. Miller III, "Freddie Mac and Fannie Mae: Their Funding Advantage and Benefits to Consumers," at 6 (2001).

These kinds of mistakes have real consequences. For this reason, we urged CBO to amend the draft version of the 2001 report prior to publication, but our comments were disregarded.

Flaws of CBO's 2001 Report

Overall, we find CBO's 2001 report to be fatally flawed. While the report corrects some of the mistakes in the 1996 study, substantial problems remain and, in fact, several major new errors were introduced. It also introduces a new, inappropriate accounting methodology.

In contrast to the report's expansive view of Freddie Mac's funding advantage, the report is exceedingly narrow with regard to the benefits we bring. As a result, the report overstates Freddie Mac's funding advantage and understates the benefits we bring to America's families. Appendix B provides Freddie Mac's detailed analysis of the 2001 CBO report.

As shown below, simply correcting four of the largest errors would completely reverse the conclusion CBO appears determined to reach.

1. CBO overstates the funding advantage on long-term debt by $1.2 billion

The error: The 2001 CBO report estimates a 47 basis point funding advantage on long-term debt based on a comparison of our debt yields to those of primarily "A" rated debt. This is a faulty comparison. Standard & Poor's assigned Freddie Mac a "risk to the government" rating of AA- in February 1997, which was reaffirmed earlier this year.[13] Comparing Freddie Mac to primarily single-A firms skews the analysis and overstates our funding advantage. Our funding costs necessarily are lower than A-rated companies because of our greater financial strength.[14]

The correction: Use the same database used by CBO but exclude the A and A-minus rated debt issues from the comparison group. This lowers the funding advantage to about 30 basis points.

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[13] To compute the funding advantage on long-term debt, CBO relies exclusively on one academic study that compares Freddie Mac's borrowing costs to the average for a group of firms, most of which have debt with lower credit ratings. See Brent W. Ambrose and Arthur Warga, "An Update on Measuring GSE Funding Advantages," November 6, 2000. Of the 70 firms considered by Ambrose and Warga, only eight issued debt with 'AA' ratings (which ranges from AA- to AA+) while 63 issued debt rated 'A' (one firm issued both "A" and "AA" rated debt). Moreover, 45 of the firms had ratings of A or A-, which are at least two categories below the AA- "risk to the government" rating that Standard & Poor's assigned to Freddie Mac.

[14] In addition to this $1.4 billion error, CBO further overstates the funding advantage Freddie Mac obtains from our Congressional charter by ascribing the entire liquidity premium to the charter – without giving any credit to our success in creating a broad investor base and a liquid market for our securities. Irrespective of our charter, Freddie Mac securities command a liquidity benefit because we are large, well managed and highly capitalized compared to other corporate issuers. Moreover, the market rewards our financial innovations. Studies previously submitted to CBO demonstrate the importance of liquidity in financial markets.

2. CBO understates the share of short-term debt, inflating the funding advantage by $1.0 billion

The error: The 2001 CBO report used 20 percent as its estimate of the share of short-term debt, excluding any short-term issuance that was part of swap agreements. In fact, approximately 40 percent of Freddie Mac's and Fannie Mae's debt is short-term. The relevant funding advantage should reflect the term of the debt at issuance because swap agreements do not have a substantive effect on the funding cost of the debt.

The correction: Use the actual short-term share of 40 percent.

3. CBO understates the jumbo-conforming spread, reducing the mortgage interest savings we bring by $1.0 billion

The error: The 2001 CBO report uses an arbitrarily low estimate of the difference between conforming and jumbo mortgage interest rates. In contrast to the report's use of a single point estimate of 22 basis points, numerous studies estimate a jumbo-conforming spread between 25 and 40 basis points.[15] CBO itself used a spread of 35 basis points in its 1996 study.

The correction: Apply the more realistic spread of 30 basis points to the loans we purchase.

4. CBO understates the benefits we bring to all fixed-rate conforming market borrowers by $4.0 billion

The error: The 2001 CBO report credits Freddie Mac and Fannie Mae with reducing mortgage interest rates only on loans actually purchased. In fact, as a result of Freddie Mac and Fannie Mae, *all* conforming market borrowers enjoy a reduced mortgage interest rate. Without Freddie Mac, even jumbo loans would carry higher mortgage rates.

When the government implements a policy to lower gasoline costs by selling oil from the nation's reserve, the effectiveness of the decision would not be measured solely in terms of gasoline price reductions directly attributable to the actual oil sold from the reserve. Instead, the government would measure the impact on supply and demand – and consumer prices – of the overall market reaction. Similarly, it is appropriate to measure Freddie Mac's and Fannie Mae's impact on the overall mortgage market.

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[15] *See, e.g.*, Cotterman, Robert F. and James E. Pearce, "The Effects of the Federal National Mortgage Association and the Federal Home Loan Mortgage Corporation on Conventional Fixed-Rate Mortgage Yields", in *Studies on Privatizing Fannie Mae and Freddie Mac*, ed. by U.S. Department of Housing and Urban Development, 97-168 (1996); Hendershott, Patric H. and James D. Shilling, 'The Impact of the Agencies on Conventional Fixed-Rate Mortgage Yields', *Journal of Real Estate Finance and Economics*, 2: 101-115 (1989); Toevs, Alden L. A Critique of the CBO's Sponsorship Benefit Analysis. New York: First Manhattan Consulting Group. 2000; Pearce, James E. *Conforming Loan Differentials: 1992-1999.* Welch Consulting. November 2000.

The correction: Apply the more realistic 30 basis point estimate of the jumbo-conforming spread to the rest of the conventional mortgage market.

Making these four corrections alone would reverse CBO's conclusion and show that the benefits Freddie Mac and Fannie Mae bring to consumers outweigh the advantage they derive from their Congressional charters.

The CBO report ignores other benefits that are extremely important to America's families and the strength of our economy. Without Freddie Mac and Fannie Mae, the flow of low-cost mortgage funds would be susceptible to shocks in global capital markets, homeownership rates would be lower, and fewer lower-income and minority families would own a piece of the American dream.

Compounding these mistakes is the CBO report's "capitalized subsidy" treatment of our funding advantage. This accounting method has never been used by anyone – whether within or outside the government – to measure either the benefits we bring or our funding advantage. CBO provided little in the way of justification or documentation for using this very complex and contrived approach. Drs. Pearce and Miller reviewed the draft version of CBO's 2001 report, with particular attention to the capitalized subsidy treatment, and concluded that CBO applied this methodology inappropriately and inconsistently.[16] Their analysis can be found at Appendix C.

Prior to the May 2001 publication of its report, CBO provided Freddie Mac a draft version for comment. The draft showed the effect of different methodologies on the estimate of the funding advantage. Correcting its own errors in the 1996 study reduced CBO's estimate of the subsidy by $4.1 billion.[17] The capitalized subsidy treatment added $2.0 billion back.[18]

Thus, only by using this inappropriate accounting treatment is CBO able to assert that Freddie Mac and Fannie Mae derive a funding advantage of approximately $10 billion from their Congressional charters. If CBO had simply corrected its 1996 report, there would be no retained funding subsidy whatsoever. CBO would have concluded that Freddie Mac passes the entire value of the funding advantage through to borrowers in the form of lower mortgage interest rates.

Finally, CBO questions the benefits and advantages of Freddie Mac in a vacuum, without similarly questioning those of other financial institutions. In fact, depositories receive funding advantages through deposit insurance, access to Federal Reserve Bank liquidity and FHLB advances and have an average cost of funds that is lower than Freddie Mac's.

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[16] James E. Pearce and James C. Miller III, "Response to CBO's Draft Report: Federal Subsidies and Housing GSEs," at 5 (2001).

[17] Draft version of CBO's 2001 report at Table B-1. The table shows the technical adjustments growing to $4.1 billion in 2000.

[18] Table 6 shows "subsidies to securities" issued by Freddie Mac and Fannie Mae during 2000 of $4.2 billion and $5.5 billion, respectively, for a total of $9.7 billion under the "capitalized subsidy" treatment. This estimate is $2.0 billion larger than the $7.7 billion estimate.

Such comparisons would demonstrate the significant benefits and efficiencies of Freddie Mac and Fannie Mae.

Freddie Mac is a great Congressional success story. We have a 30-year track record of bringing enormous benefits to America's families and stability to our nation's housing finance system. For proof we need only look at our country's record homeownership rate, the quality of our housing stock, the strength of the housing market in today's economy and the stable supply of low-cost mortgage funds.

III. REGULATORY STRUCTURE IN GSE ACT IS FUNDAMENTALLY SOUND

As a result of our superior risk management capabilities, strong capital position and state-of-the-art information disclosure, Freddie Mac is unquestionably a safe and sound financial institution. The six voluntary commitments we announced last October with Chairman Baker, Ranking Member Kanjorski and other Members of the Subcommittee, and which were fully implemented by this spring, put Freddie Mac at the vanguard of world financial practices. Freddie Mac asked William Seidman, the former Chairman of the FDIC, for an assessment of our commitments. He concluded:

> *Your package of disclosures and standards puts [Freddie Mac] in a position of providing more and better public information than any another financial institution, both regulated and non-regulated, of which I am aware*.[19]

Our six commitments set the pace for other institutions to adopt similar practices and to enhance their public disclosures. In fact, Moody's Investors Service said that the commitments "set new standards not only for themselves [Freddie Mac and Fannie Mae], but for the global financial market."[20] They added:

> *The leadership shown by Freddie Mac and Fannie Mae could prove difficult for other firms to ignore, and could usher in a wave of enhanced financial risk disclosure. This may prove to be one of the most important ramifications of the GSEs' initiatives.*[21]

Effective and credible regulatory oversight is an essential complement to our already strong financial position. In this regard, we believe that the regulatory structure set forth by the GSE Act is fundamentally sound. It ties capital to risk; provides a comprehensive set of enforcement authorities; provides oversight without unnecessary intrusion and enables the enterprises to respond aggressively to market developments with innovations to meet their mission.

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[19] Memorandum of L. William Seidman to Freddie Mac (December 13, 2000).
[20] *New Freddie Mac & Fannie Mae 'Open Book' Policy: A Positive Credit Development*, Moody's Investors Service (October 2000).
[21] Ibid.

Regulatory Structure Ties Capital to Risk

Freddie Mac supports a regulatory structure that closely ties capital to risk. Over the past few years, global experts in financial regulation have embraced principles of risk management that are forward-looking and market-oriented. Supported by sophisticated analytical techniques and technologies, this approach is superior to the traditional reliance on static leverage ratios, which have been the primary tool for regulating financial institutions for the past several decades.

This new thinking about capital adequacy is embodied in the first "pillar" of the capital framework set forth by the Basel Committee on Banking Supervision in its June 1999 consultative paper. [22] It also is aligned with the views of U.S. financial regulatory experts "that, to be effective, regulatory capital charges need to be reasonably attuned to underlying economic risks."[23] In recent testimony, Federal Reserve Chairman Alan Greenspan stated "the nature and complexity of risk undertaken by many larger organizations have made the blunt traditional measures of capital adequacy…less meaningful."[24]

Not only is Freddie Mac highly skilled at managing risk, we are extremely well capitalized for the risks we take. We manage our business to hold enough capital to withstand ten years of economic stress resembling the Great Depression. In addition to our own rigorous capital management, the GSE Act provides a comprehensive regulatory capital structure, subjecting us to both a minimum capital requirement as well as a stringent risk-based capital standard. The minimum capital requirement applies to both on-balance-sheet and off-balance-sheet assets, unlike bank capital standards. The risk-based capital standard is the industry's toughest, requiring us to withstand ten years of extremely severe stress.

The risk-based capital standard required by the GSE Act is innovative, stringent, dynamic and more responsive to risk than any ratio-based capital regulation.[25] It requires Freddie Mac to maintain sufficient capital to withstand a ten-year period of extreme swings in both credit and interest-rate risks.

The credit risk portion of the stress test is based on the assumption that defaults and losses on mortgages occur throughout the United States at a rate and severity equal to the highest default rates experienced in a regional downturn.[26] The interest-rate risk portion

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[22] Basel Committee on Banking Supervision, *A New Capital Adequacy Framework*, Consultative Paper on Capital Adequacy No. 50, (June 1999) (the "1999 Basel Consultative Paper").

[23] Remarks by Governor Laurence H. Meyer, Annual Washington Conference of the Institute of International Bankers, Washington, D.C. (March 5, 2001): "In short, the increasing sophistication of markets demands that, to be effective, regulatory capital charges need to be reasonably attuned to underlying economic risks."

[24] Testimony of Chairman Alan Greenspan on the Condition of the U.S. Banking System before the Committee on Banking, Housing and Urban Affairs, U.S. Senate (June 20, 2001).

[25] 12 U.S.C. §4611.

[26] 12 U.S.C. §4611(a)(1).

of the test mandates a stress test in which yields on 10-year Treasury bonds fall or rise by as much as 600 basis points.[27] Further, the GSE Act requires a 30 percent add-on to required stress test capital to account for management and operations risk.[28]

A pioneer in the use of risk-based stress tests, Freddie Mac believes that a well-implemented capital standard must produce specific and accurate determinations of required capital. Assigning too little capital or too much both have negative consequences. Too little capital could jeopardize our ability to withstand an extreme downturn in the economy. On the other hand, requiring too much capital would impose unnecessary costs on the nation's families. Mortgage rates would rise, and mortgage products attractive to lower-income borrowers would become more expensive or unavailable.

Furthermore, it is critical that the test be operationally workable. For Freddie Mac to purchase mortgages on a daily basis, we must be able to calculate the amount of capital that will be required and incorporate it into our business planning and processes.

Finally, the stress test should recognize prudent risk management. For example, the test should not penalize the use of swaps and other securities contracts, the function of which is to manage interest-rate risk. This is an essential risk management strategy that we and other large, well-capitalized financial institutions use every day. A standard that ties capital to risk would appropriately recognize this strategy with a lower capital requirement. According to Chairman Greenspan, regulators must "develop ways to improve their tools while reinforcing incentives for sound risk management."[29]

Regulatory Structure Provides Adequate Oversight Authority

The regulatory structure set forth by the GSE Act provides the regulator of Freddie Mac and Fannie Mae adequate authorities to discharge its statutory responsibilities. The provisions relating to supervisory review, examination and enforcement were explicitly crafted to dovetail with the risk-based capital standard. The stringent risk-based stress test, combined with the minimum capital standard and the capital add-on for management and operations risk, represents a comprehensive set of regulatory controls that is unprecedented. Thus, individual authorities should not be viewed in a vacuum, but in terms of the entire regulatory structure.

Moreover, the "package" of authorities conferred on the regulator of Freddie Mac and Fannie Mae was uniquely designed for the oversight of two GSEs engaged in one line of work: financing mortgages. In contrast, examiners of large banks must inspect activities ranging from annuities to foreign currencies to commercial loans to credit cards taking place at hundreds of subsidiaries here and around the world.

[27] 12 U.S.C. §4611(a)(2).
[28] 12 U.S.C. §4611(c)(2).
[29] Testimony of Chairman Greenspan, at 1 (June 20, 2001).

Congress based many of the enforcement and prompt corrective action provisions in the GSE Act on provisions contained in banking statutes.[30] Other enforcement provisions are unique to the regulation of the GSEs. For example, OFHEO is required to report the results and conclusions of its examinations to Congress,[31] a reporting requirement unique among financial regulators. This periodic public disclosure by our regulator provides independently reviewed financial information to Congress and the public about Freddie Mac's and Fannie Mae's condition and results of operations. This type of detailed, independent, safety-and-soundness review is not available for any other regulated financial institution.

In a recent report, the General Accounting Office (GAO) examined the various enforcement authorities possessed by OFHEO, the Federal Housing Finance Board and federal banking regulators. Noting that the regulatory bodies differ somewhat in the authorities accorded to them, the GAO nonetheless concluded that "based on each regulator's powers and authorities, it appears that each regulator has statutory tools available to address significant safety and soundness concerns."[32]

Regulatory Structure Facilitates Enterprises' Housing Mission

Effective regulatory oversight must fully satisfy the challenge of ensuring Freddie Mac's and Fannie Mae's safety and soundness while enabling the enterprises to vigorously innovate to achieve their housing mission. The existing regulatory structure explicitly takes into account our public mission "to promote access to mortgage credit throughout the Nation."[33] Congress embedded this important public purpose in our charter, and affirmed it with explicit statutory findings when it enacted the GSE Act. Congress found that "the continued ability of [Freddie Mac and Fannie Mae] to accomplish their public missions is important to providing housing in the United States and the health of the Nation's economy…"[34] Thus, an effective regulator of Freddie Mac and Fannie Mae must be mindful of Congress' intent that Freddie Mac fulfill its mission.

In the GSE Act, Congress entrusted the Secretary of Housing and Urban Development (HUD) with ensuring that Freddie Mac is accomplishing the purposes for which Congress chartered us and created OFHEO as an office within HUD. [35] Entrusting a regulator with a role to encourage the accomplishment of public purposes is not unique to the GSE Act.

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[30] *See, e.g.*, the Legislative History in the Senate Report accompanying the 1992 Act: "The procedural requirements for cease-and-desist proceedings parallel those applicable to similar proceedings by federal banking regulators against insured depository institutions and institution-related parties under section 8 of the Federal Deposit Insurance Act and related authorities" and "These grounds [for appointing a conservator in the 1992 Act] resemble established grounds for appointment of a conservator for federally insured depository institutions, including national banks, under the Federal Deposit Insurance Act and the Bank Conservation Act." S. Rep. No. 102-282 at 58, 62 (1992).

[31] 12 USC §4521(a).

[32] Letter from the United States General Accounting Office to the Honorable Richard H. Baker regarding a Comparison of Financial Institution Regulators' Enforcement and Prompt Corrective Action Authorities, at 2 (January 31, 2001).

[33] 12 U.S.C. §1451(b)(4)(Note).

[34] 12 U.S.C. §4501(2).

[35] 12 U.S.C. §§4541, 4511.

The authorizing statute of the Office of Thrift Supervision requires the Director of the OTS to "exercise all powers" to "encourage savings associations to provide credit for housing safely and soundly."[36] Similarly, the Federal Housing Finance Board is charged with ensuring that "the Federal Home Loan Banks carry out their housing finance mission" among its other duties.[37]

Regulatory Structure Allows for Innovation

In keeping with the explicit intentions stated by Congress, the regulatory structure should not stifle mortgage innovation. Freddie Mac's rapid response to market developments with private sector-based innovations has proven effective in expanding homeownership broadly, including opening new doors of opportunity for low- and moderate-income families. Effective oversight should allow Freddie Mac to vigorously pursue our housing mission in a safe and sound manner and within the bounds of the Charter. In establishing OFHEO's unique role, Congress stated:

> *The Committee does not mean for the Director [of OFHEO] to impose his or her business judgment on, or interfere with, the normal management prerogatives of an enterprise that has sound financial controls, and is adequately capitalized, and profitable. Congress created the enterprises under private ownership and management to bring the entrepreneurial skills and judgments of the private sector to bear on the accomplishment of public purposes related to housing. The Committee does not mean to upset this unique structure or to encourage any government official to second guess decisions of enterprise management arrived at through the exercise of honest, unbiased judgment of what is in the best interests of the enterprise*.[38]

In summary, we believe the regulatory structure envisioned by the GSE Act is fundamentally sound. It ties capital to risk; provides a comprehensive set of enforcement authorities; provides oversight without unnecessary intrusion and enables the enterprises to respond aggressively to market developments with innovations to meet their mission.

Notwithstanding the appropriateness of this regulatory structure, it is critical that the regulator have the confidence of Congress, the public and investors. Mr. Chairman, you have put the question of the appropriate location of Freddie Mac's safety-and-soundness regulation before the Subcommittee. Other policymakers, including HUD Secretary Martinez, have expressed support for retaining OFHEO's safety-and-soundness oversight responsibilities.[39]

Our view on this important matter is that if there were a change in location of the regulator, that entity should be highly competent and credible; should support housing as an important public policy objective; and should enjoy bipartisan support. Freddie Mac

[36] 12 U.S.C. §1463(a)(3).
[37] 12 U.S.C. §1422(a)(3)(B)(ii)
[38] S. Rep. No. 102-282, at 25 (1992).
[39] "U.S. Housing Chief - Strengthen Mortgage Agency Regulator," Reuters, June 21, 2001.

remains committed to continuing our constructive working relationship with OFHEO and to providing any input and assistance that you believe would be helpful to your deliberations.

IV. CONCLUSION

America enjoys the world's best housing finance system because of the high level of support provided by Freddie Mac and the secondary market. By attracting global capital to finance homeownership in America, we reduce mortgage costs, saving families billions of dollars. The extraordinary liquidity we bring to the nation's mortgage markets also helps stabilize our nation's economy.

To meet our mission, Freddie Mac is relentlessly wringing out every unnecessary cost and barrier to homeownership; we are pushing the limits of technology; and we are searching the globe to find the lowest cost funds for housing. As a result of our activities, more families than ever before can afford to buy a home. In addition, they compete on an equal footing with the largest corporations for low-cost funds in the world's capital markets. The value we bring to America's families and to the nation's economy far outweighs the funding advantage we derive from our Congressional charter.

Freddie Mac's strength and vitality ensure that we are able to meet the housing finance needs of the future. Our superior risk management capabilities, strong capital position and state-of-the-art information disclosure make Freddie Mac unquestionably a safe and sound financial institution. Effective and credible regulatory oversight is an essential complement to our already strong financial position. The regulatory structure contained in the GSE Act is forward-thinking, comprehensive and appropriate to the enterprises and the mission we serve.

* * * * *

Thank you for the opportunity to appear today. I look forward to working with Chairman Baker, Congressman Kanjorski and the members of this Subcommittee to secure the future of our housing finance system and, with it, the dreams of millions of families.

Freddie Mac and Fannie Mae:

Their Funding Advantage and Benefits to Consumers

by

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January 9, 2001

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Executive Summary

The benefits that American consumers derive from the activities of Freddie Mac and Fannie Mae and the advantages these private corporations receive from their federal charters are central issues in the public discussion of their role in the housing finance system. At the request of Freddie Mac, we independently analyzed a 1996 report that the Congressional Budget Office prepared on this subject (the "1996 Study") and then addressed the benefits to consumers and to the corporations.

- We first find that the 1996 Study both understated the consumer benefits and overstated the firms' advantage in borrowing funds (the "funding advantage"). The study used faulty data and inappropriate methodology.

- We estimate that Freddie Mac and Fannie Mae generate interest-cost savings for American consumers ranging from at least $8.4 billion to $23.5 billion per year. In contrast, we estimate that the value Freddie Mac and Fannie Mae indirectly receive from federal sponsorship in the form of their funding advantage ranges from $2.3 billion to $7.0 billion annually. Thus, even using the lowest estimate of consumer benefits and the highest estimate of the funding advantage in our range of estimates, the value of consumer interest-cost savings resulting from Freddie Mac and Fannie Mae's activities significantly exceeds the value of their funding advantage.

  - Freddie Mac and Fannie Mae also provide benefits beyond those that can be quantified in terms of savings on mortgage interest expense by homeowners. These include the maintenance of liquidity in the mortgage market during periods of financial turbulence and the expansion of homeownership opportunities for low-income and minority families. No attempt to quantify these additional consumer benefits was made here.

- We also find that federal sponsorship of Freddie Mac and Fannie Mae provides a "second best" structure for a housing finance system assuming that the "first best" system would have no government involvement at all. This is because Freddie Mac and Fannie Mae supply

housing finance more efficiently than could the depositories alone. Banks and thrifts receive federal support in the form of deposit insurance, access to Federal Reserve Bank liquidity, and Federal Home Loan Bank advances and as a result they have an average cost of funds lower than Freddie Mac and Fannie Mae.

In summary, the 1996 Study was deficient in many respects. A more accurate approach shows that, under current federal sponsorship of Freddie Mac and Fannie Mae, consumers receive benefits significantly greater than the funding advantage received by the two corporations.

I. Introduction

Congressman Richard Baker (R-LA), Chairman of the Subcommittee on Capital Markets, Securities and Government Sponsored Enterprises of the Committee on Banking and Financial Services of the U.S. House of Representatives, has requested that the Congressional Budget Office ("CBO") update its 1996 estimates on the funding advantage and benefits to families resulting from Freddie Mac and Fannie Mae's activities (the "1996 Study").[1] The 1996 Study attempted to quantify the advantages that Freddie Mac and Fannie Mae derive from their Congressional charters and the benefits Freddie Mac and Fannie Mae provide to consumers. The Department of the Treasury, the Department of Housing and Urban Development, and the General Accounting Office prepared similar studies.[2]

Freddie Mac and Fannie Mae are government-sponsored enterprises ("GSEs") that play an important role in the secondary market for residential mortgages. Operating under essentially identical federal charters, the two firms benefit from lower costs and larger scale than they would have in the absence of federal sponsorship. Freddie Mac and Fannie Mae use these advantages to reduce the cost of mortgage credit and provide other benefits to homeowners. The lower yields they pay on their securities are often characterized as a "funding advantage" or even as a "subsidy" when comparing Freddie Mac and Fannie Mae to purely private corporations that have no nexus to the government. The 1996 Study attempted to quantify the funding advantage resulting from federal sponsorship and the benefits conveyed to mortgage borrowers.

The 1996 Study generated substantial controversy. It was well received by those who support a change in the charters of Freddie Mac and Fannie Mae. Others observed that the analysis contained serious flaws that led to an understatement of the net benefits provided by the

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[1] Letter dated July 12, 2000 from Representative Richard H. Baker to Mr. Dan L. Crippen, Director, Congressional Budget Office, requesting updates of estimates contained in Congressional Budget Office (1996).

[2] Department of the Treasury (1996); Department of Housing and Urban Development (1996); and General Accounting Office (1996).

two housing enterprises. In anticipation of the forthcoming CBO report, we were asked by Freddie Mac to review the 1996 Study and provide current analyses.

In this report, we address these fundamental questions:

- Are there major errors in the 1996 Study, and, if so, what are they?
- What are reasonable values for the funding advantage that Freddie Mac and Fannie Mae receive and the benefits that Freddie Mac and Fannie Mae's activities provide consumers?
- Would consumers be better or worse off in the absence of federal sponsorship of Freddie Mac and Fannie Mae?

These questions are answered in the following sections. Section II addresses errors in the data and methodology used in the 1996 Study. That study was deficient in many respects. We find that it systematically overstated the funding advantage received by Freddie Mac and Fannie Mae and understated the benefits to consumers. A repeat of these mis-measurements in the new report would render its findings and conclusions without credible foundation. Section III quantifies the funding advantage realized by Freddie Mac and Fannie Mae through their charter relationship with the federal government. Section IV addresses the benefits provided to consumers by the activities of Freddie Mac and Fannie Mae. We find that the benefits are much greater than the funding advantage. Section V includes an analysis of the market for mortgage credit and identifies certain efficiency-enhancing effects that follow from Freddie Mac and Fannie Mae's charters. We find that federal sponsorship of Freddie Mac and Fannie Mae supplies housing finance more efficiently than would depositories alone. The final section contains concluding remarks.

We find that the funding advantages and benefits must be expressed as ranges of estimates rather than as particular values. This follows from the underlying changes in market conditions over time and from the inability to obtain precise estimates of key relationships. Our fundamental conclusion is unqualified, however. Under present institutional arrangements in the mortgage lending industry, it would be a mistake to withdraw or curtail federal sponsorship of Freddie Mac and Fannie Mae. Because of Freddie Mac and Fannie Mae, consumers enjoy

savings on their mortgages that are substantially greater than the funding advantages that are derived from Freddie Mac and Fannie Mae's charters.

II. The Approach Used by CBO in 1996 Overstated the Funding Advantage and Understated Benefits to Consumers

The CBO used a simple framework to quantify the funding advantage and the benefits to consumers. The first step in deriving the funding advantage was estimation of spreads that measure the differences in yields on Freddie Mac and Fannie Mae securities and similar securities issued by fully private firms. The second step was multiplying those spreads by the outstanding balances of Freddie Mac and Fannie Mae securities. A parallel procedure was used to derive the benefits to consumers. A spread estimating the effect of Freddie Mac and Fannie Mae on mortgage interest rates was applied to the outstanding amount of conforming mortgages held by Freddie Mac and Fannie Mae. In applying this framework in 1996, CBO overstated the funding advantage and understated the benefit to consumers.

The 1996 CBO estimate of the funding advantage was overstated in that:

1. It treated all Freddie Mac and Fannie Mae debt as long-term debt, ignoring the lower funding advantage on short-term debt.

2. It incorrectly measured the funding advantage on long-term debt and mortgage-backed securities ("MBS");

The 1996 CBO estimate of the consumer benefits was understated in that:

1. It ignored the benefits of Freddie Mac and Fannie Mae's activities on conforming mortgages not purchased by them;

2. It failed to recognize that the unadjusted spread between rates on jumbo and conforming mortgages does not capture the full impact of Freddie Mac and Fannie Mae on mortgage rates.

Overstating the Funding Advantage

Freddie Mac and Fannie Mae issue four types of securities to fund their purchases of mortgages: short-term debt (with maturities less than one year); long-term bullet debt; long-term callable debt (which can be called or retired early); and MBS. CBO overstated the funding advantage for Freddie Mac and Fannie Mae for each of these securities. First, the funding advantage on long-term debt was used for short-term debt even though empirical evidence demonstrates that short-term debt receives a lower funding advantage. Second, CBO failed to adjust its estimates of the funding advantage on long-term debt to account for the better liquidity of GSE debt. Third, the funding advantage on long-term callable debt was mis-measured, resulting in a significant overstatement of the funding advantage on this debt. Fourth, CBO overstated the funding advantage for MBS.

Overstatement of the funding advantage on short-term debt

The distinction between long-term and short-term debt is significant. The range of estimates for the funding advantage on short-term debt is substantially lower than for long-term debt. As we discuss further in the next section, the estimated funding advantage for short-term debt ranges from 10 to 20 basis points, while the corresponding range for long-term debt is 10 to 40 basis points.[3] At the same time, the share of short-term debt is large. The proportion of debt outstanding at year-end 1995 that was due within a year was about 50% for both Freddie Mac and Fannie Mae. At the end of third quarter 2000, the proportions were 41% for Fannie Mae and 45% for Freddie Mac.[4] This difference in the term of debt, and its implication for estimating the funding advantage, were ignored by CBO in its 1996 report. The appropriate approach is to compute separate funding advantages for short-term and long-term debt.

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[3] Freddie Mac's and Fannie Mae's practice of synthetically extending the maturity of debt with swaps and other derivatives does not matter for the assessment of the short-term funding advantage. They participate in the swap market at the same prices as other large financial institutions. Thus, the funding advantage on short-term debt whose maturity is extended is no higher than the funding advantage for short-term debt whose maturity is not extended.

[4] These figures were obtained from the 1996 annual reports and third quarter, 2000 investor-analyst reports of Freddie Mac and Fannie Mae.

Measuring spreads on long-term debt

Analysts estimate the Freddie Mac and Fannie Mae funding advantage in debt issuance by comparing yields on debt issued by Freddie Mac and Fannie Mae and debt issued by firms that lack federal sponsorship but are perceived as otherwise similar to Freddie Mac and Fannie Mae. Such comparisons are sensitive to the choice of firms judged to be similar to Freddie Mac and Fannie Mae, to the period under consideration, and to how similar other private securities are to Freddie Mac and Fannie Mae securities with respect to such technical characteristics as default risk, callability, time-to-maturity, and amount issued. No such comparison is perfect. There are always some differences between the Freddie Mac and Fannie Mae securities and the comparators.

For its 1996 report, CBO utilized spreads from a commissioned study by Ambrose and Warga (1996). The authors were careful to limit their comparison of Freddie Mac and Fannie Mae securities to private securities that were similar in a number of important respects. However, they did not take into account the higher liquidity of Freddie Mac and Fannie Mae debt that results from the scale of their security issuances and the consistency of their presence in the securities markets. Withdrawal of federal sponsorship might reduce the amount of debt they issue, but they would still likely be among the largest private issuers in the market. Large issues generally are more readily marketable and therefore carry lower yields. Thus, yield comparisons that do not take issue size, volume outstanding, and other determinants of liquidity into account will overstate the yield spreads.[5]

[5] The Ambrose and Warga study has other methodological deficiencies that were revealed by academic reviewers at the time the study was prepared (see, for example, Cook (1996) and Shilling (1996)). The spreads reported are averages obtained from monthly data. The sample of comparable debt issues varies widely over the ten-year period studied, but the authors report very limited information on how the levels and dispersion in the distribution of spreads varies over time. This may be a concern because months in which the number of possible comparisons is small receive as much weight in arriving at the final averages as months with large numbers of possible comparisons. Because the margin of error is higher in the months with few comparisons, those months should

Misuse of spreads on callable debt

The 1996 CBO procedure uses a weighted average of the spreads on callable and bullet debt to derive its estimate of the funding advantage. Because the spread on callable debt used by CBO was extraordinarily high (more than twice the spread on bullet debt), this approach resulted in an average spread on long-term debt that was considerably higher than would have been obtained from spreads on bullet debt alone.

Callable debt generally has an initial period where the debt cannot be called, after which it may be called, or bought back by the issuer at a stated price before maturity. It is far more difficult to compare yields across callable bonds because yields are extremely sensitive to the specific call features of a bond, for example, the length of the initial non-call period, the call price, and the maturity. Further, the projected yield depends on one's forecast of the volatility of interest rates over the investor's holding period of the bond, as volatility effects the probability that interest rates will fall sufficiently to trigger a call.

The difficulty of comparing yields on callable debt is exacerbated by the lack of data on callable bonds by other issuers. Freddie Mac and Fannie Mae issue significant amounts of callable debt because it provides an effective hedge for the mortgage assets that they are funding. Few other corporations have this need and regularly issue callable debt. In 1999, the GSEs accounted for most of the callable debt market.

Incorporating callable spreads into the derivation of the funding advantage on long-term debt was inappropriate. First, the callable spreads are very difficult to measure, as noted above. Second, there is no evidence to indicate that the funding advantage on callable debt is larger than that on non-callable debt. Callable debt is essentially long-term debt with an "option" to turn the debt into short-term debt. Market prices for callable debt reflect the value of the bullet debt plus the value of the call provision. The value of the call provision is determined in the derivatives market where Freddie Mac and Fannie Mae have no advantage over other market participants.

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receive less weight in the overall average. Failure to reflect these deficiencies in its application of the Ambrose and Warga data led CBO to treat the funding advantage as being more precisely estimated than it actually was.

Therefore, a more appropriate approach to estimate the funding advantage on callable debt would be to use spreads on long-term debt that can be more accurately measured.

Funding advantage on MBS

CBO included a component for MBS in its estimate of the overall funding advantage. As with the debt component, the funding advantage on MBS was derived from an estimated spread using yields on Freddie Mac and Fannie Mae securities relative to yields on comparable securities issued by other firms. The difficulty with this approach is that "private-label" MBS are very different from Freddie Mac and Fannie Mae MBS. Private-label MBS have lower volume, less frequent issuance, less liquidity and more complex features that investors must analyze. In particular, private-label MBS are typically "structured" securities where the cash flows on the underlying mortgages are divided among various investors. Consequently, estimates of the relevant spreads are very rough approximations. Most are based on the impressions of market participants rather than documented statistical comparisons subject to verification by other researchers. If these estimates were to be used, the estimates would need to be adjusted downward for the much greater liquidity of Freddie Mac and Fannie Mae securities.

After assessing the available information, CBO concluded that the relevant MBS spread was between 25 and 60 basis points. Although this range errs on the high side, we appreciate the recognition, reflected in the broad range, that the spread is not subject to precise estimation. However, the CBO did not carry this cautious approach into the calculation of the funding advantage. The agency used 40 basis points as its baseline value to estimate the MBS component of the funding advantage, and its sensitivity analysis considered a deviation of only 5 basis points from that value.

We believe that the relevant MBS spread is significantly less than 40 basis points and would fall between the spreads on short-term and long-term debt. In part, the basis for this opinion is the recognition that Freddie Mac and Fannie Mae are earning modest rates of return on their MBS business. Annual reports indicate that the two enterprises earn guarantee fees of approximately 20 basis points, which must compensate them for bearing default risk and other costs. Thus, Freddie Mac and Fannie Mae do not appear to be retaining much, if any, funding

advantage through the issuance of MBS. Furthermore, MBS are backed by or "collateralized" by the underlying mortgages. Debt, on the other hand, is uncollateralized. As a result, perception of credit quality plays less of a role in valuing MBS than debt, because the investor has the assurance of quality from the mortgage collateral. Therefore, the funding advantage on MBS would be less than the funding advantage on the long-term debt.

Understating Benefits to Consumers

CBO estimated the benefits to consumers from Freddie Mac and Fannie Mae by multiplying a long-term average of the spread between interest rates on jumbo and conforming fixed-rate mortgages by the volume of mortgages financed by Freddie Mac and Fannie Mae.[6] This procedure understates the savings to borrowers on two accounts. First, it does not incorporate the effect on *all* conforming mortgage rates of the activities of Freddie Mac and Fannie Mae, including the reduction in rates on the conforming mortgage loans they do not purchase. Second, the jumbo-conforming spread understates the full effect that Freddie Mac and Fannie Mae have on mortgage rates.

The jumbo-conforming spread

Nearly all observers agree that Freddie Mac and Fannie Mae reduce interest rates on all conforming mortgage loans. The most dramatic evidence of this fact is found in comparisons of interest rates for loans above and below the conforming loan limit.[7] These rate comparisons can be found listed in newspapers around the country.

Freddie Mac and Fannie Mae are not allowed to purchase loans for amounts above the conforming limit. The effect this limitation has on interest rates is graphed in Exhibit 1. In this chart, the average interest rates in a range of loan size categories are shown relative to average interest rates for the category just below the conforming loan limit (which in 1998 was

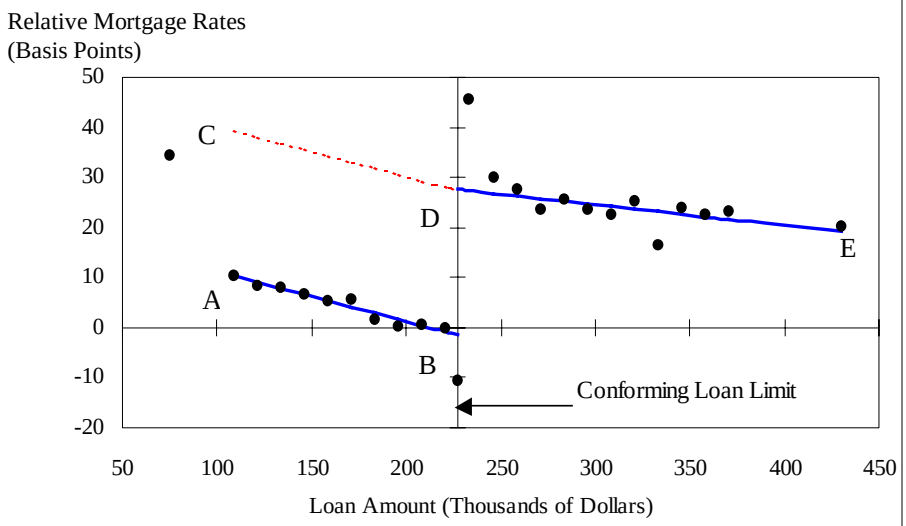
[6] In practice, the amount financed is measured as the (annual average) balance outstanding of mortgages in portfolio or pooled into MBS.

[7] The 2001 conforming loan limit is $275,000 for one-family properties. Higher limits apply in Alaska, Hawaii, Guam and the U.S. Virgin Islands.

$240,000).[8] The graph shows that mortgage interest rates decline steadily with loan size until the conforming limit is reached. Then rates take a sharp jump upward before resuming their decline. This relationship is consistent with the proposition that net economic costs of originating and servicing decline with loan size.[9]

The gap between the dotted line, CD, and the solid line AB, is the direct measure of the jumbo-conforming spread.

Exhibit 1
Relative Mortgage Rates and Loan Amount
(Fixed Rate Mortgages, California, 1998)



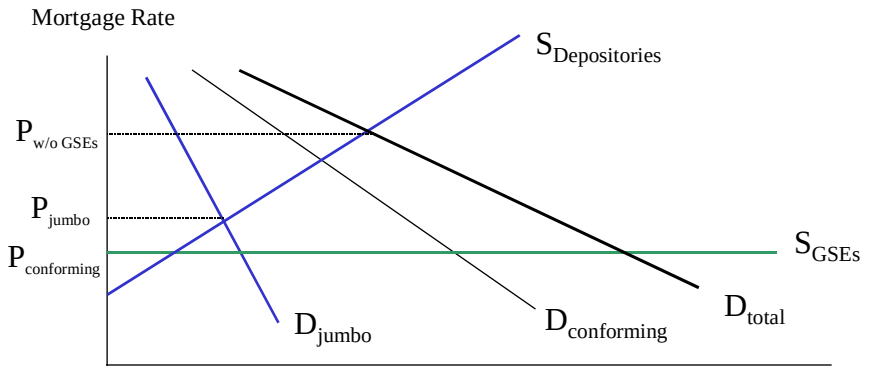
[8] The exhibit plots relative mortgage interest rates for fixed-rate loans in the Monthly Interest Rate Survey ("MIRS") after adjusting for origination week, lender type, new versus existing home, and loan-to-value intervals. The points plotted are averages computed over intervals with width of $12,500. Exceptions are the endpoints and the average for loans made for exactly $240,000. Readily obtainable mortgage rates found in newspapers make none of these adjustments.

[9] This phenomenon underlies empirical specifications that have been used in previous research on the conforming loan limit. See Cotterman and Pearce (1996) and Hendershott and Shilling (1989). The reasons for the inverse relationship between loan size and net economic costs include significant fixed costs of origination, servicing and real-estate-owned disposition that cause average costs per loan dollar to decline dramatically with loan size. These

Freddie Mac and Fannie Mae reduce rates on jumbo loans as well as on conforming loans

CBO used the average jumbo-conforming spread estimated over the 1989-1993 interval as its measure of the effect of Freddie Mac and Fannie Mae on mortgage interest rates. This approach assumes that the line CDE in Exhibit 1 represents the relationship between mortgage rates and loan size that would be observed in the absence of Freddie Mac and Fannie Mae. As we show below, this assumption understates consumer benefits because Freddie Mac and Fannie Mae almost certainly reduce interest rates on jumbo loans as well as on conforming loans.

Exhibit 2
Jumbo-Conforming Spreads Understate Consumer Savings



A theoretical argument for this point is illustrated in Exhibit 2. In this graph, the mortgage interest rate in the absence of Freddie Mac and Fannie Mae is found at the intersection of the depository supply curve ($S_{Depositories}$) and the total mortgage demand curve (D_{total}). When supply from Freddie Mac and Fannie Mae is introduced, there emerge two mortgage rates, both

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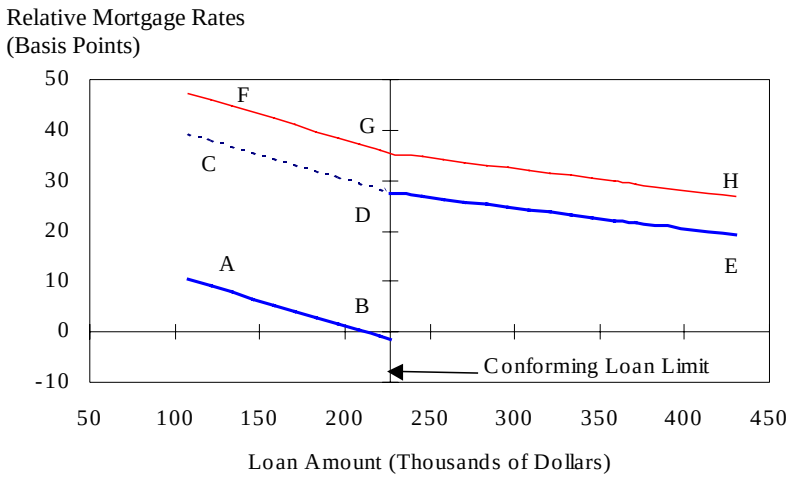
factors more than offset a slightly more expensive prepayment option for jumbos and some evidence that default rates are higher for very-low-balance and for super-jumbo loans.

lower than the rate that would prevail in their absence. The rate for jumbo loans is determined by the intersection of the depository supply curve and the demand curve for jumbo loans (P_{jumbo}). The rate for conforming loans is determined by the intersection of the GSEs supply curve and the demand curve for conforming loans ($P_{conforming}$). Thus, the presence of Freddie Mac and Fannie Mae reduces rates on both jumbo and conforming loans, and the jumbo-conforming differential understates the savings to mortgage borrowers.

This reasoning suggests that mortgage rates in the absence of Freddie Mac and Fannie Mae would lie on line FGH in Exhibit 3 rather than line CDE. The jumbo-conforming spread would understate the effect of Freddie Mac and Fannie Mae on mortgage rates by the distance between segments CD and FG.

Exhibit 3
Freddie Mac and Fannie Mae Also Lower Jumbo Rates
(Fixed Rate Mortgages)



Partial versus full benefits to borrowers

This analysis does not take into account the fact that Freddie Mac and Fannie Mae are restricted to a market that has other federally-subsidized participants. Depositories have been, and continue to be, substantial holders of residential mortgages. They have access to insured deposits, which carry explicit federal guarantees, and low-cost advances from the Federal Home

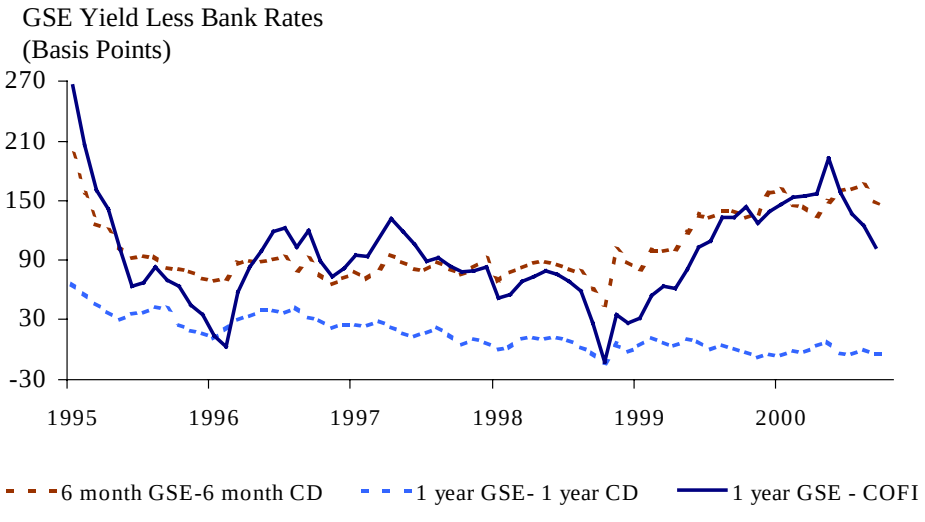
Loan Banks ("FHLBs") — institutions with federal sponsorship similar to that of Freddie Mac and Fannie Mae.

Consequently, Freddie Mac and Fannie Mae compete with other subsidized participants. Thus, the estimates of the spreads on securities are not strictly comparable with the estimates of the interest rate effect. The security spreads are estimated on a *gross* basis, while the effect on mortgage interest rates is *net* of the effect of depositories. The amount by which depositories reduce interest rates on jumbo loans would have to be added to the effect indicated in Exhibit 3 to obtain the total effect of Freddie Mac and Fannie Mae on conforming mortgage rates.

The point that depositories also receive a funding advantage relative to firms without access to any federally supported sources of funds is illustrated in Exhibit 4.[10] The chart shows that the 11th District Cost of Funds Index ("COFI"), which reflects the cost of funds for western savings associations, is below the yield on comparable Freddie Mac and Fannie Mae debt. Similarly, the spreads to certificates-of-deposit ("CD") yields show that banks have lower cost of funds.

[10] The yield spreads are 6-month GSE debt less the 6-month CD yield, one-year GSE debt less the one-year CD yield, and one-year GSE debt less the 11th FHLB district COFI.

Exhibit 4
Amount by which Bank Cost of Funds are Below GSE Yields



An issue deserving further research is the extent to which the funding advantage accruing to banks benefits consumers. Exhibit 5 demonstrates that, unlike Freddie Mac and Fannie Mae, the depositories provide substantial support to the jumbo market.[11] As well, relative to Freddie Mac and Fannie Mae, these depositories, the largest FHLB advance holders, have a lower share of net mortgage acquisitions (originations plus purchased loans, less loans sold) in the low- and moderate-income market. In the Home Mortgage Disclosure Act ("HMDA") data, 93 percent of all jumbo loans for which income is reported are made to borrowers with incomes above 120 percent of the area median. From the data presented in Exhibit 5, one can infer that approximately one-half of FHLB advances are being used to fund jumbo mortgage loans, loans

[11] Source: FHLB System 1999 Financial Report, Thrift Financial Reports, 1999, Home Mortgage Disclosure Act data, 1999. FHLB advances for the top 10 advance holding members are from page 17 of the Federal Home Loan Bank System 1999 Financial Report. FHLB advances for Commercial Federal Bank, Dime Savings Bank, and Standard Federal Bank are from their respective Thrift Financial Report filings line item SC720 (Advances from FHLB). Low- and moderate-income shares are the percent of dollars reported in HMDA going to borrowers with incomes less than the area median income; includes all conventional refinance and home purchase loan originations and purchases for single-family residences, net of loans sold.

made disproportionately to upper-income borrowers. In contrast, despite being given access to low-cost funding from the FHLBs, the top FHLB advance holders extended only 20 percent of their net conventional, single-family mortgage acquisitions (weighted by dollars) to low- and moderate-income borrowers in 1999, according to HMDA. Freddie Mac's 31 percent low-and moderate-income share (dollar-weighted) is higher than every one of the top FHLB advance holders.

Exhibit 5
Federal Home Loan Bank Advances and Shares of Net Mortgage Acquisitions (1999)

Institution	FHLB Advances December 31, 1999 (Millions of Dollars)	Low and Moderate-Income Shares (Percentages)	Jumbo Shares (Percentages)
Washington Mutual Bank, FA, Stockton, CA	45,511	14	55
California Federal Bank, San Francisco, CA	23,377	2	75
Washington Mutual Bank, Seattle, WA	11,151	19	41
Sovereign Bank, Wyomissing, PA	10,488	18	44
Charter One Bank, SSB, Cleveland, OH	9,226	22	38
PNC Bank, NA, Pittsburgh, PA	6,651	17	46
Bank United, Houston, TX	6,593	4	68
Norwest Bank, MN	6,100	23	37
World Savings Bank, FSB, Oakland, CA	5,655	18	42
Astoria FS&LA, New York City, NY	5,305	4	77
Commercial Federal Bk, a FSB, Omaha, NE	4,524	27	24
Dime Savings Bank of NY, New York City, NY	4,463	2	58
Standard Federal Bank, Troy MI	4,222	21	30
Top FHLB advance holders (total)	143,265	14	52
Freddie Mac	n.a.	31	0
Fannie Mae	n.a.	29	0

Benefits to consumers in addition to reductions in mortgage rates

Efficiencies in underwriting and increases in low-income and minority homeownership

Freddie Mac and Fannie Mae provide benefits beyond reductions in interest rates on mortgage loans. These benefits include increased availability of information provided to consumers, standardization of the mortgage lending process, and more objective qualifying criteria through the development of automated underwriting. Freddie Mac and Fannie Mae have also increased the availability of low-down-payment mortgages. Such loans make mortgage financing more available to low- and moderate-income families. Recent research indicates that home ownership for these families and minority families are 2% to 3% higher as a result of the

efforts of Freddie Mac and Fannie Mae (Quercia, McCarthy, and Wachter (2000), and Bostic and Surette (2000)).

Improved dynamic efficiency and liquidity

Freddie Mac and Fannie Mae also increase the dynamic efficiency of the mortgage market, a point ignored by CBO. In periods of turbulence in the capital markets, Freddie Mac and Fannie Mae provide a steady source of funds. These conditions occur relatively frequently. Since 1992, the capital markets have had two episodes of abnormal shortages of liquidity—one beginning in late 1994 following the Orange County bankruptcy and another in l998 and 1999 when important developing countries devalued their currencies and Russia defaulted on some bonds. Recent research indicates that the activities of Freddie Mac and Fannie Mae " ... returned capital to the mortgage market. That action not only stabilized the price of mortgage-backed securities, it also stabilized home loan rates during the credit crunch of 1998" (Capital Economics (2000)).

Lower risk to taxpayers

If the roles of Freddie Mac and Fannie Mae were reduced substantially, many presume that withdrawal of federal sponsorship would reduce taxpayer risk in direct proportion to the removal of risk from the books of Freddie Mac and Fannie Mae. This presumption ignores the likely expansion of other federally-sponsored participants that support housing. Yezer (1996) notes that such charter revocation would lead to expansion of the demand for Federal Housing Administration ("FHA") mortgages. The analysis of Miller and Capital Economics (2000), discussed in Section V (and illustrated in Exhibits 2 and 12) indicates that mortgages held by depositories would also increase. These reallocations of mortgage credit would shift additional risk to the FHA insurance and deposit insurance programs. Additionally, families would bear more interest rate risk because, when faced with higher rates on fixed-rate mortgages, they will increase their use of adjustable-rate mortgages ("ARMs"). On balance, in addition to reallocating resources to less efficient housing finance participants, charter revocation would likely increase risks to taxpayers.

Summary

In summary, CBO's 1996 report was deficient in many respects. The approach used overstated the funding advantage Freddie Mac and Fannie Mae derive from their charters, understated some components of consumer benefits, and ignored others. In addition, the use of point estimates for the various spreads, rather than ranges, provides the misleading impression that the funding advantage and benefits to consumers can be quantified precisely. A repeat of these mis-measurements in the new report would render its findings and conclusions without credible foundation.

We turn next to our own assessment of the advantages afforded Freddie Mac and Fannie Mae through their federal charters, followed by our assessment of the benefits derived by consumers.

III. Estimates of Funding Advantages to Freddie Mac and Fannie Mae

CBO overstated the subsidy involved in debt-funded mortgages. The 1996 CBO report estimated that the funding advantage to Freddie Mac and Fannie Mae between 1991 and 1994 was 70 basis points. As we show below, this figure is far above the range of estimates available from other sources. Recall that the CBO estimate is a weighted average of estimates for callable and noncallable long-term debt, and it treats all debt as long-term debt.

Several alternative measures are summarized in Exhibit 6. The LIBOR[12] - Agencies spread indicates that Freddie Mac and Fannie Mae issue short-term debt at 10 to 20 basis points below LIBOR, which is a *short-term* funding cost of certain highly rated banks.[13] The long-term, noncallable spreads show how yields on Freddie Mac and Fannie Mae debt compare with yields on debt rated AA.[14] The estimates cover a range of sources and methodologies. The first estimate, 10 to 30 basis points, is from a study by Salomon Smith Barney that compares specific

[12] London Inter-Bank Offer Rate ("LIBOR").

[13] In this table, we use spreads to Agencies as reported in Bloomberg. Bloomberg includes Freddie Mac, Fannie Mae, the FHLBs and government agencies that issue debt in its "Agencies" category.

Freddie Mac or Fannie Mae issues with specific securities issued by two of the largest non-financial corporations and one large financial corporation. All the comparable securities were AA-rated, with large outstanding issue volumes. The second estimate, from Bloomberg, uses a proprietary methodology to adjust for important differences in the characteristics of the securities being compared. The third row is taken from a study by Toevs (2000) using data on Fannie Mae debt and market data from Lehman Brothers. The last estimate is from Ambrose and Warga (1996), a study whose deficiencies were discussed above.

Exhibit 6
Estimates of the Debt Funding Advantage

Short-Term Spreads	Basis Points
LIBOR – Agencies Spread:[1]	10-20
Long-Term Spreads	
Highly liquid AA Debt-Freddie Mac & Fannie Mae[2]	10-30
Highly liquid AA Debt – Agencies[3]	37
AA Financials Debt –Fannie Mae[4]	34
AA Financial Debt – Fannie Mae[5]	32 - 46

[1]Bloomberg data, 12-month term, short term debt.
[2]Salomon Smith Barney (August 2000).
[3]Bloomberg data, 5-year average.
[4]Toevs (2000) for the period 1995-1999.
[5]Ambrose & Warga (1996) for the periods (1985-90) and (1991-1994).

Exhibit 6 does not include any entries for spreads on callable debt. These spreads are difficult to measure accurately because callable debt securities are not issued in significant amounts by other corporate issuers and are very heterogeneous. In particular, appropriate comparisons of callable debt must hold constant the restrictions on the call options of the various securities. A given callable debt issue typically will have some restrictions, such as how soon the issuer may exercise the call option. These restrictions can be important to the value the debt issue commands in the marketplace. For example, a security that allowed the issuer to exercise

[14] Standard and Poor's (1997a) rated Freddie Mac and Fannie Mae AA- on a stand-alone basis.

the option after one year will have a lower value than a security that does not allow the issuer to exercise the option until five years have passed. Thus, given the difficulty in obtaining valid spreads for callable debt, a preferable approach is to use spreads on noncallable debt.[15]

Exhibit 6 illustrates that alternative estimates of the relevant noncallable spread range from 10 to 40 basis points. The estimates are obtained from a variety of sources and were generated using several methodologies. They are all substantially below the 70 basis points used in the 1996 CBO report. Use of a weighted average of spreads on callable and noncallable debt accounts for some of the inflation in the CBO estimate. We understand that CBO may not incorporate callable spreads into its analysis in the forthcoming report, and if this is true the change will move the CBO estimate closer to the alternative estimates. But the spread will still likely be overstated if the Ambrose-Warga methodology is used to estimate noncallable spreads.

CBO's Sensitivity Analysis

As exhibited above, it is necessary to use ranges rather than single numbers to express the extent to which Freddie Mac and Fannie Mae benefit from a funding advantage for long-term debt. In its 1996 report, CBO recognized that it was using spreads that were measured imperfectly and included a brief sensitivity analysis[16] to illustrate the effect of variation from baseline assumptions for some key parameters, including the spreads on long-term debt. The Ambrose-Warga presentation of results on yield to maturity used mean values for relatively long intervals. This provided almost no basis to assess the stability of the spreads over time or the amount of dispersion in spreads at a point in time. In the absence of either of these elements, it is difficult to have confidence in the estimates. This is particularly true given the methodological

[15] An alternative would be to estimate the fair value of the call option through an option-adjusted spread calculation before the yields are compared. See Kupiec and Kah (2000).

[16] Although we agree that including a sensitivity analysis is, in principle, a useful exercise, we believe that the analysis in the 1996 CBO report understated the dependence of the CBO's conclusions on assumptions about the precise values of key parameters. In the case of debt funding spreads, CBO's attempt to conduct a valid sensitivity analysis was handicapped by the limited information on dispersion in yield spreads between Freddie Mac and Fannie Mae and other private companies provided in Ambrose and Warga's study.

shortcomings identified above and the disparity between the Ambrose-Warga estimate and the available alternatives we present in Exhibit 6.

The CBO sensitivity analysis of the debt funding advantage would have benefited from additional information on how spreads vary, both over time and across other debt issues at a point in time. In the absence of such information, CBO considered a very small reduction in the debt spreads, of 10 basis points, from the 70 basis points used in the primary calculations. This reduction covered only a small fraction of what we know of the possible dispersion of spread values and it closes little of the gap between the CBO figure and alternative estimates. Thus, the sensitivity analysis did not accurately portray the fragility of the 1996 CBO estimates of the funding advantage.

Estimates of the Funding Advantage

Using the information in Exhibit 6, and debt and MBS balances outstanding for Freddie Mac and Fannie Mae, funding advantage spreads are provided in Exhibit 7. The spread on the MBS, reflecting both its long-term nature, and its collateral value, likely falls between the values of the spreads on short-term and long-term debt. We calculate the MBS funding advantage using a spread of 10 to 30 basis points.[17] Higher amounts would be inappropriate given the 20 basis point guarantee fees that the corporations earn and the significant liquidity differences between their MBS and private-label MBS.

[17] Freddie Mac and Fannie Mae's MBS are backed by real-property collateral as well as a corporate guaranty. Thus a proxy for the funding advantage on MBS, net of liquidity and credit quality, could be the yield spread between five-year, AAA-rated bullet debt and comparable Freddie Mac and Fannie Mae debt. In a report, Freddie Mac (1996, p. 33) computed this spread to be about 23 basis points over 1992-1996.

Exhibit 7
Estimates of the Funding Advantage
(Data as of September 30, 2000)

	Balances Outstanding (Billions of Dollars)				
Security Type	**Freddie Mac**	**Fannie Mae**	**Totals**	**Spread (basis points)**	**Funding Advantage (Billions of Dollars per Year)**
Short-term Debt	181	251	432	10-20	0.4 - 0.9
Long-Term Debt	226	356	582	10-40	0.6 - 2.3
MBS	559	701	1.260	10-30	1.3 - 3.8
Total Funding Advantage					2.3 - 7.0

Exhibit 7 summarizes our estimates of the total funding advantage received by Freddie Mac and Fannie Mae through their government sponsorship. Since this calculation is based on a range of spreads for individual components (short-term debt, long-term debt, and MBS), the resulting aggregate must be expressed as a range as well. In each case above, we have been careful to reflect reasonable estimates – on the high side as well as the low side. While we might be inclined to narrow this range, out of an abundance of caution we have included the results of reputable analyses and methodologies that bracket what we consider the more likely figures.

Multiplying the spread range of 10 to 20 basis points for short-term debt by the short-term debt balances outstanding of Freddie Mac and Fannie Mae gives an estimate of their annual funding advantage for short-term debt that ranges from $0.4 billion to $0.9 billion. Similarly, the estimates for the annual funding advantage on long-term debt and MBS are $0.6 billion to $2.3 billion and $1.3 billion to $3.8 billion respectively. Thus, our estimate of the total annual funding advantage for Freddie Mac and Fannie Mae ranges from $2.3 billion to $7.0 billion.

IV. Estimates of the Benefits to Mortgage Borrowers Provided by Freddie Mac and Fannie Mae's Activities

Estimates of the full benefits to mortgage borrowers must take consideration of several factors. First, Freddie Mac and Fannie Mae operate directly only in the conforming market. They may only purchase loans at or below the conforming loan limit. The bulk of these loans are fixed-rate mortgages. However, Freddie Mac and Fannie Mae also affect the rates on adjustable-rate and jumbo mortgages, effects ignored by the previous CBO analysis. Additional evidence on the benefits of Freddie Mac and Fannie Mae activities can be inferred from borrower behavior, such as borrowers' utilization of adjustable- versus fixed-rate loans. Measuring the full effect of Freddie Mac and Fannie Mae on conforming loans requires estimates of their effect on jumbo loans and estimates of the effect of depositories on jumbo loans.

Estimates of the Jumbo-Conforming Spread

Direct estimates of the effects on conforming, fixed-rate mortgages

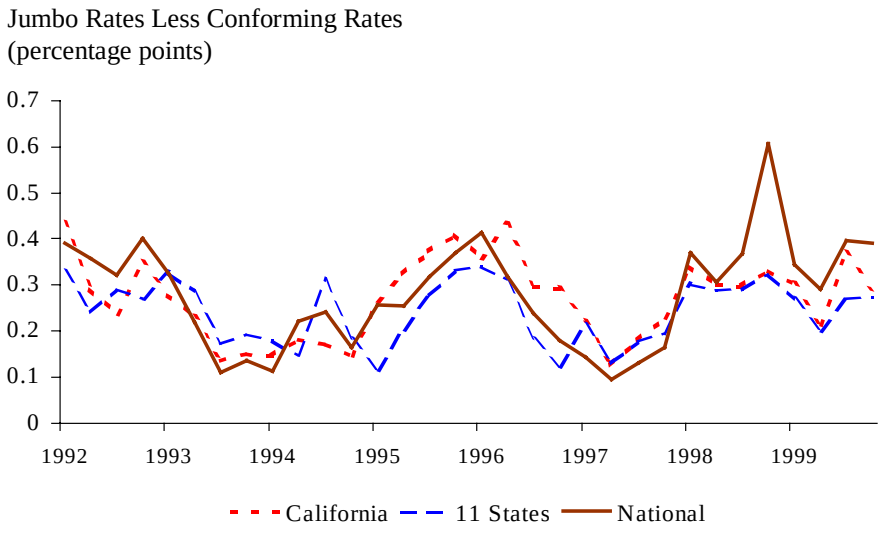
The 1996 CBO report used a figure of 35 basis points as its estimate of the jumbo-conforming spread. CBO derived this figure from the commissioned study by Cotterman and Pearce, which evaluated the spread from 1989 through 1993. The 35 basis points reflected an average of relatively high values in the early part of the period and relatively low values toward the end.

Since 1993 the differential has fluctuated. Exhibit 8, from Pearce (2000), charts the path of rates on conforming, fixed-rate mortgages between 1992 and 1999. Three measures are charted in the exhibit. Two are extensions of the 1996 Cotterman and Pearce analysis estimating the differential for California and for 11 states with large numbers of jumbo loan originations. These estimates adjust for risk factors and loan size. The third is an extension of the series charted in Freddie Mac (1996).[18] Averages for these series, over the 1992-99 period, range

[18] The data used for the national series for jumbo rates come from HSH Associates (1992-1998), and Banxquote (1999), and for conforming rates from the Primary Mortgage Market Survey (Freddie Mac). This series is not risk-adjusted.

between 24 basis points and 28 basis points. All three series are in the neighborhood of 30 basis points in 1998 and 1999, when origination rates were very high.

Exhibit 8
Jumbo Rates Exceed Fixed-Rate Conforming Mortgage Loan Rates



Indirect estimates of the jumbo-conforming spread using ARM shares

Exhibit 8 displays unadjusted and risk-adjusted direct estimates of the jumbo-conforming differential. Additional evidence on the benefits of Freddie Mac and Fannie Mae activities can be inferred from borrower behavior, such as borrowers' utilization of adjustable-rate versus fixed-rate mortgages ("FRMs"). Freddie Mac and Fannie Mae activities have larger effects on rates of FRMs than ARMs because their funding cost advantage is larger on long-term debt than on short-term debt.[19] First-year rates on ARMs are generally below rates on FRMs, and research by Nothaft and Wang (1992) (as well as others cited by Nothaft and Wang) has shown that the ARM share will decrease generally as the spread between rates on ARMs and FRMs narrows. Thus, Freddie Mac and Fannie Mae reduce the ARM share of conforming loans by narrowing the

[19] ARMs are priced off short-term yields, whereas FRMs are priced off long-term yields. For spreads see Exhibit 7.

spread between rates on ARMs and FRMs. This effect was noted previously by Hendershott and Shilling (1989).

The research on the determinants of ARM shares indicates that we should expect that a 30-basis-point narrowing of the spread between rates on FRMs and ARMs will produce a 10-percentage point reduction in ARM share.[20] The estimates presented in the exhibit above indicate that between 1992 and 1999 rates on conforming FRMs averaged 24 to 28 basis points below rates on jumbo FRMs. This difference implies that we should expect the ARM share to be about 8 to 10 percentage points lower for conforming loans than for jumbo loans.

Pearce (2000) compares the ARM shares in the jumbo and conforming markets using the MIRS data. The comparison was restricted to loans with 15- and 30-year terms to maturity and loan-to-value of at least 60%. The ARM share among conforming loans for amounts between 75% and 99% of the conforming limit was compared to the ARM share among jumbo loans between 115% and 150% of the conforming limit.

The results are shown in Exhibit 9. The jumbo-conforming difference in ARM shares is much larger than the 8 to 10 percentage points expected from the directly-estimated conforming loan differential. The difference in ARM shares ranges between 13 and 36 percentage points in California and between 14 and 29 percentage points in the 11-state aggregate. The differences in ARM share averaged 23.6 percentage points in California and 21.6 percentage points in the 11 states. Differences of this magnitude are consistent with conforming loan differentials much larger than 30 basis points. If a differential of 30 basis points in rates on FRMs was expected to reduce ARM share by 10 percentage points, a 20+ percentage point reduction in ARM share among conforming loans is consistent with a reduction in interest rates on conforming FRMs of 60 basis points or more.

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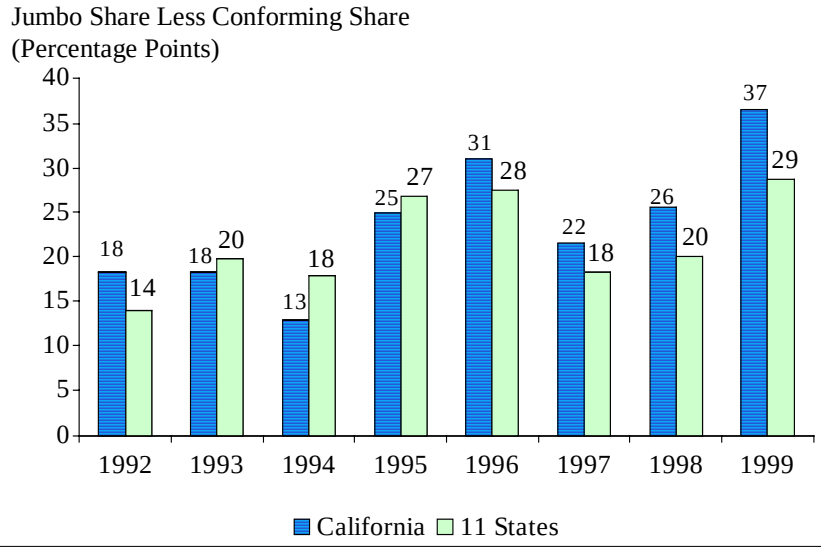
[20] Nothaft and Wang (1992). Also, in their concluding section, Hendershott and Shilling (1989), estimate that a 30-basis-point conforming loan differential would reduce the conforming ARM share by 10 percentage points in 1987 and 11 basis points in 1988.

Exhibit 9
Jumbo ARM Shares Exceed Conforming ARM Shares



Incorporating effects on jumbo loan rates

So far we have presented two approaches, direct and indirect, to quantifying the difference between rates on jumbo and conforming fixed-rate loans. The direct estimates quantify differences in interest rates that can be observed directly. We use a range that spans two measures for the direct estimates.[21] The first is an unadjusted measure of the empirical differences between the two sets of loan rates. The second is a risk-adjusted differential obtained by Pearce's update using the Cotterman and Pearce methodology. As an alternative, indirect measure, obtained from inferring the jumbo-conforming differential through the ARM share effect, we use the Nothaft and Wang methodology. These direct and indirect measures are substitute methods for examining the jumbo-conforming differential. The indirect estimates take intangible considerations into account. However, neither of these approaches identifies the full effect of Freddie Mac and Fannie Mae on conforming, fixed-rate loans. Neither takes into account the effect of Freddie Mac and Fannie Mae on jumbo loan rates. Furthermore, neither

takes into account the effect that depositories would have on mortgage rates in the absence of federal sponsorship of Freddie Mac and Fannie Mae. Thus, both are *partial* measures of the effect of the two housing enterprises on mortgage rates.

Measuring the full effect of Freddie Mac and Fannie Mae on conforming loans requires estimates of their effect on jumbo loans and estimates of the effect of depositories on jumbo loans. Unfortunately, the data to obtain either of these estimates do not exist because we do not observe a fully private market. In the discussion below we will estimate the dollar amount of borrower savings by applying interest-rate effects to outstanding mortgage balances. In order to recognize the presence of these hard-to-measure effects, we will use a conservative value of 5 basis points for each. Thus, the directly-measured effect yields a partial reduction in mortgage rates of 29 to 33 basis points when the effect of Freddie Mac and Fannie Mae on jumbo rates is added and a total reduction of 34 to 38 basis points when the effect of depositories on jumbo rates is added. Similarly, the indirectly-measured spread (of 30 to 60 basis points) yields a partial reduction of 35 to 65 basis points and a total reduction of 40 to 70 basis points.

An additional benefit that needs to be accounted for is the reduction in rates on conforming ARMs. Evidence from the Primary Mortgage Market Survey (PMMS) indicates that rates on conforming ARMs are about 5 basis points lower than rates on jumbo ARMs. This suggests that the direct effect of Freddie Mac and Fannie Mae on conforming ARM rates is about 5 basis points. Assuming that depositories reduce jumbo ARM rates by about 5 basis points, the total effect on ARM mortgages is about 10 basis points.

Estimating Dollar Savings to Borrowers

The savings to borrowers are estimated by applying the interest rate reductions to the appropriate balances. The discussion above identified separate interest rate effects for fixed-rate conforming loans, adjustable-rate loans, and jumbo loans. It also pointed out that the estimates of the jumbo-conforming spread should be adjusted for the effects that Freddie Mac, Fannie

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[21] The average difference in commitment rates on fixed-rate, conforming mortgages over the 1992–1999 period is 28 basis points. The average effect from application of the Cotterman and Pearce methodology over this time period provides a range of 24 to 26 basis points.

Mae, and the depositories have on jumbo loan rates. In the discussion below, we present two series of benefit estimates that begin with the jumbo-conforming spread and progressively incorporate the various adjustments. At the end we present two alternative ranges.

The most conservative estimate applies the directly-estimated jumbo-conforming spread, a range of 24 to 28 basis points, to the outstanding balances of conforming, fixed-rate mortgages, which is currently about $3.3 trillion.[22] This procedure yields a range of $7.9 billion to $9.2 billion. This estimate is a counterpart to the 1996 CBO benefit estimate, except that it includes all conforming fixed-rate mortgages rather than just those that have been purchased by Freddie Mac and Fannie Mae. Although this range understates the full effect of the two GSEs on conforming mortgage interest rates, it lies completely above the $2.3 to $7.0 billion range estimated for the funding advantage. If we add in benefits to borrowers using conforming ARMs (5 basis points applied to $0.37 trillion) and jumbo loans (5 basis points applied to $0.65 trillion), the range increases to $8.4 billion to $9.7 billion.

These ranges do not adjust the jumbo-conforming spread for the separate effects of Freddie Mac and Fannie Mae and depositories on jumbo loan rates. We have assumed that these two effects, which we cannot measure, would each be about 5 basis points. Incorporating this assumption raises the range on the (fixed-rate) jumbo-conforming spread to 34 to 38 basis points, and the total benefit range becomes $11.7 billion to $13.0 billion.

A parallel set of estimates can be constructed using the indirect estimate of the jumbo-conforming spread of 30 to 60 basis points. This range implies that benefits to borrowers using conforming, fixed-rate loans range from $9.9 billion to $19.7 billion. Adding in benefits to conforming ARM and jumbo borrowers implies a range of $10.4 billion to $20.2 billion. Adjusting the fixed-rate, jumbo-conforming spread for the effect of Freddie Mac and Fannie Mae and the depositories on jumbo rates brings the total to $13.6 billion to $23.5 billion.

[22] The outstanding balances cited in this paragraph are based on the following figures: conventional loans totaling $4.30 trillion, of which 15% are jumbo and 85% are conforming. Within the conforming market, 90% are assumed to be fixed-rate and 10% are assumed to be ARMs.

Overall, then, we have two *alternative* ranges for the full benefits. Using the directly-estimated spread, the range is $11.7 billion to $13.0 billion. Using the indirectly-estimated jumbo-conforming spread, the range is $13.6 billion to $23.5 billion. Both these ranges are well above our range for the funding advantage ($2.3 billion to $7 billion).

Exhibit 10

Effects on Conventional Mortgage Rates, 1992 - 1999

		Measurement*	**Spread (basis points)**
Effects on Mortgage Rates of Freddie Mac & Fannie Mae	Conforming Fixed-Rate Market: Alternative Measures	1. CFRM: Direct Estimate (Commitment Rates)	28
		2. CFRM: Direct Estimate (Pearce, 2000)	24 – 26
		3. CFRM: Indirect Estimate (Pearce, 2000)	30 – 60
	Jumbo Market	4. JFRM: (Assumed)	5
	Conforming ARM Market	5. ARM: (Commitment Rates)	5
		Partial Benefits Range: (Conforming + Jumbo) CFRM: Direct (1&2 + 4) CFRM: Indirect (3 + 4) ARM: (5)	 29 – 33 35 – 65 5
Effects on Jumbo (FRM & ARM) Rates from Subsidies to Other Financial Institutions		6. (Assumed)	5
		Full Benefits Ranges: FRM Direct (1&2+4+6) FRM Indirect (3 + 4 + 6) Conforming ARM (5 + 6) Jumbo (4)	 34-38 40-70 10 5
TOTAL BENEFITS ($billions)		**Partial Direct**** **Full Direct** **Full Indirect**	**$ 8.4 - $ 9.7** **$11.7 - $13.0** **$13.6 - $23.5**

* CFRM: conforming, fixed-rate market; JFRM: jumbo fixed-rate market. The fixed-rate conforming single-family market, is $3.3 billion. The ARM market is $0.37 billion and the jumbo market is $0.65 billion (9/30/00). **Direct without depositories' measures $8.4 to $9.7. Direct with depositories' having a five basis point effect on jumbo rates measures $11.7 to $13.0.

It is important to recognize that the jumbo-conforming differential understates the measure of the benefits provided by Freddie Mac and Fannie Mae because the jumbo rate is already lowered by benefits provided to the jumbo market by financial institutions with government support. That is, the jumbo market also benefits directly from government support through both the existence of the FHLBs and deposit insurance, and indirectly from Freddie Mac and Fannie Mae. The *total* benefit to consumers, including direct and indirect effects of Freddie Mac and Fannie Mae on conforming, fixed-rate mortgages and the additional effects on fixed-rate mortgages from subsidies held by all financial institutions in the jumbo market is in the range of $13.6 to $23.5 billion.

V. Freddie Mac and Fannie Mae Increase Efficiency

To this point we have focused on the key question raised in the 1996 CBO report—the extent to which the Freddie Mac and Fannie Mae funding advantage generates benefits to consumers or been absorbed by the two enterprises. Our findings in this area effectively rebut CBO's 1996 conclusion that a large percentage of the funding advantage is absorbed. They do not, however, address a more general objection to federal sponsorship that has been raised in discussions of Freddie Mac and Fannie Mae. This objection claims that federal sponsorship through the credit markets distorts the allocation of resources that would otherwise arise from the interaction of supply and demand in competitive markets. In the case of housing-related GSEs, the claim is that their activities result in "too much" housing at the expense of other components of the nation's capital stock, such as factories, offices, and business equipment.

In this section we address that point. As we have pointed out, Freddie Mac and Fannie Mae are not the only federally sponsored entities participating in the residential mortgage market. Federally insured depositories (banks and thrifts) fund over half—$2.4 trillion—of the conventional mortgages outstanding, either directly through their loan portfolio or indirectly though their MBS holdings (Exhibit 11).[23] Freddie Mac and Fannie Mae fund about one-third of

[23] The total residential market includes single-family and multifamily mortgages. The sources for these data were the Federal Reserve Board, Federal Deposit Insurance Corporation, Office of Thrift Supervision, Freddie Mac and Fannie Mae; data were as of June 30, 2000.

this amount. The remainder is divided among the FHLBs, mortgage companies, insurance companies, pension funds, individuals, and other investors. Analyzing economic efficiency and the benefits and subsidies requires understanding the cost structures and the risk characteristics of the mortgage market.

Exhibit 11
Holders of Residential Mortgage Assets
as of June 30, 2000

Mortgage Debt	Trillions of Dollars
Total Residential	**$5.4**
FHA/VA/RHS/Ginnie Mae	$0.8
State & Local Governments	$0.1
Total Conventional	**$4.5**
Depositories & FHLBs	$2.4
Freddie Mac & Fannie Mae	$0.8
Households	$0.1
Other	$1.2

Competitive Balance

The competitive balance in the industry depends on which charter can provide funds and manage risks at the lowest cost.[24]

Freddie Mac and Fannie Mae are more efficient than the depositories in three activities:

- Channeling funds from the global capital markets to mortgage markets;
- Managing mortgage interest-rate risk; and
- Managing mortgage credit risk.

[24] Van Order (2000a) describes the "dueling charter" framework for depositories and Freddie Mac and Fannie Mae, while Van Order (2000b) provides a more technical discussion.

In the management of interest rate risk, Freddie Mac and Fannie Mae take advantage of opportunities to issue callable debt. They also operate at a large scale and are able to spread the expense of sophisticated interest rate risk management across a large volume of risks. IPS Sendero (1999) documents the continued existence of significant interest rate risk in the thrift industry.

In the management of credit risk, the traditional advantage held by Freddie Mac and Fannie Mae has been superior exploitation of geographic diversification. Quigley and Van Order (1991) and Regional Financial Associates (1998) document the importance of geographic diversification in risk reduction. Although elimination of restrictions on branching makes this advantage potentially smaller today than it was in prior decades, it is still an important consideration, because many local and regional banks and thrifts hold significant mortgage portfolios.

Another important advantage for Freddie Mac and Fannie Mae in credit risk management is their prominent role in the development of automated underwriting systems. Credit risk evaluation and management is rapidly shifting from the rules of thumb used in manual underwriting to the rigorous statistical analysis of default risk that supports mortgage scoring and automated underwriting. Straka (2000) and Standard and Poor's (1997b) summarize this transformation. Freddie Mac and Fannie Mae have access to larger and more comprehensive data files on loan performance than other major mortgage market participants. This resource gives them an advantage in development of models with strong predictive power across a broad range of risks.

Depositories have a few advantages of their own, beyond their federal sponsorship. They have more local-market knowledge that can be exploited in the assessment of credit risk. They also have opportunities to sell other products to their mortgage customers. These advantages enable depositories to fund some loans at costs below what they otherwise would incur.

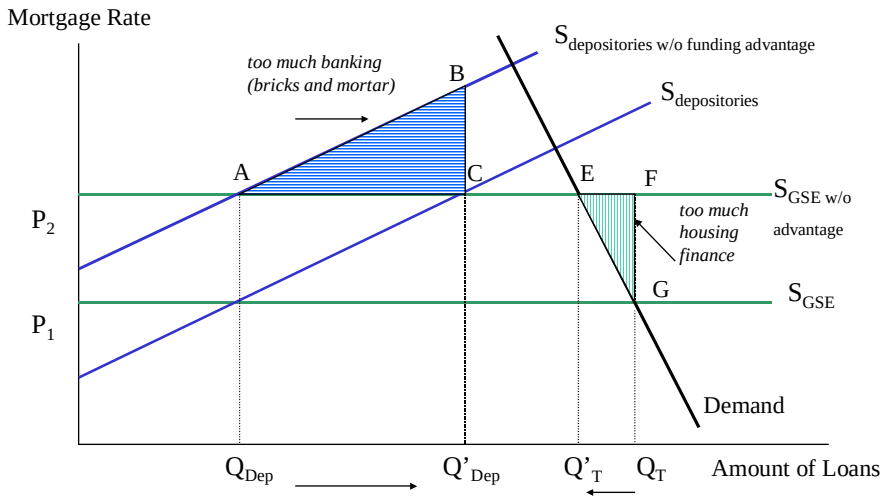
Second Best Solution

Some critics of Freddie Mac and Fannie Mae contend that their federal sponsorship distorts resource allocation in that credit is diverted into residential real estate from other uses

that, at the margin, have higher values. It is not our purpose here to address the desirability of promoting the financing of housing. Rather, we simply note that this argument fails to take into account the distortions introduced by federal deposit insurance.[25]

Exhibit 12 presents an analysis of the removal of the funding advantage to Freddie Mac and Fannie Mae in a situation where the implicit subsidization of the mortgage market through depositories is retained. The exhibit is taken from an illustration by Miller and Capital Economics (2000), who conclude that "… revoking the GSEs' charters would reduce welfare (economic efficiency). Thus, we conclude that revoking Freddie Mac's and Fannie Mae's charters cannot be justified on the grounds of economic efficiency" (page 14).

Exhibit 12
Efficiencies from Freddie Mac and Fannie Mae: the Second Best Argument



[25]Chairman Greenspan has often noted the existence of a funding advantage for banks. "Government guarantees of the banking system – deposit insurance and direct access to the Fed discount window and payment system guarantees – provide banks with a lower cost of capital than would otherwise be the case." Testimony, House of Representatives, Commerce Committee, April 28, 1999.

Exhibit 12 indicates that Freddie Mac and Fannie Mae provide an efficient allocation of resources from a "second best" perspective. Elimination of Freddie Mac and Fannie Mae's funding advantage would provide an efficiency improvement (triangle EFG) in that some of the excess housing finance would be removed from the market. This improvement would be more than offset by an efficiency loss resulting from an increase in (high cost) production by depositories (triangle ABC). Thus, elimination of Freddie Mac and Fannie Mae's federal sponsorship would lead to a loss of allocative efficiency, not a gain.[26] The loss would be greater the larger is the funding advantage of depositories relative to Freddie Mac and Fannie Mae. We next consider what the magnitude of the funding advantage, given deposit insurance, might be for the depositories.

Cost of Funds Comparisons

The GSE-AA spreads presented in Exhibit 6 do not provide a complete picture of the funding of Freddie Mac and Fannie Mae relative to other financial market participants. One must also address the sources of funds available to banks and thrifts issuing federally insured deposits. Exhibits 13 and 14 (as well as Exhibit 4 provided earlier) show that Freddie Mac and Fannie Mae have no funding advantage at all relative to depositories. Exhibit 13 lists average spreads from 1995-2000 between depository instruments and relevant GSE yields. Exhibits 4 and 14 plot these spreads on a monthly basis.

[26] This result depends on the relative elasticities of the demand and supply curves. See Capital Economics (2000) for the full discussion.

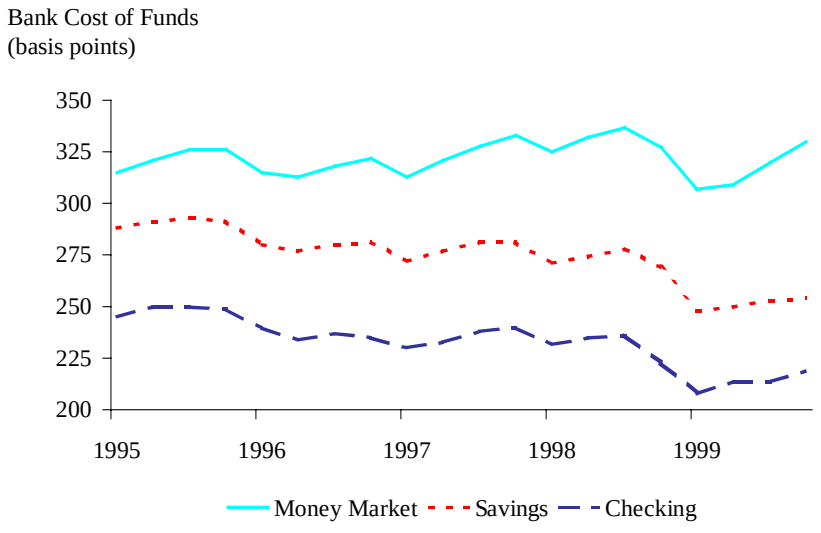
Exhibit 13
Bank Cost of Funds Are Below GSE Yields

Bank Cost of Funds less GSE Yields:

6 month CDs:	-103 bps
One year CDs:	-16 bps
11th District COFI:[1]	-95 bps
Money Market:	-322 bps
Savings Accounts:	-274 bps
Checking Accounts:	-233 bps

[1]The FHLB-San Francisco, 11th District, Monthly Weighted Average Cost of Funds

Exhibit 14
Bank Cost of Funds (1995-1999)



Using several alternative series based on data from bank call reports and Bloomberg, we clearly demonstrate that depositories have an average cost of funds below that of Freddie Mac

and Fannie Mae. As shown above, this implies that charter revocation of Freddie Mac and Fannie Mae would lead to less efficiently supplied housing finance.

VI. Conclusions

The funding advantages that Freddie Mac and Fannie Mae derive from their federal charters and the benefits they provide to homeowners cannot be measured precisely and are better expressed as ranges. Reasonable estimates of the ranges reveal that the benefits to homeowners far exceed the funding advantages of Freddie Mac and Fannie Mae. We find:

- The 1996 CBO study overstated the funding advantage received by Freddie Mac and Fannie Mae and underestimated the benefits provided by them. CBO incorrectly treated all debt as long-term debt despite the lower funding advantage on short-term debt and included separate spreads for callable debt and noncallable debt despite the difficulties inherent in measuring callable spreads. Rather than the 70 basis point funding advantage contained in CBO's 1996 report, we believe a better estimate places that funding advantage in the range of 10 to 40 basis points. Further, the 1996 CBO report did not incorporate the effect Freddie Mac and Fannie Mae have on conforming loans not purchased by them or on jumbo loans.

- Benefits to consumers provided by Freddie Mac and Fannie Mae far exceed the Freddie Mac and Fannie Mae funding advantage. The benefits to consumers are at least $8.4 billion and may be as high as $23.5 billion. The funding advantage to Freddie Mac and Fannie Mae lies between $2.3 billion and $7.0 billion.

- In addition, Freddie Mac and Fannie Mae provide benefits, not measured in this paper, beyond those that can be quantified in terms of savings on mortgage interest expense by homeowners. These benefits include maintenance of liquidity in the mortgage market during periods of financial turbulence and expanding homeownership opportunities for low-income and minority families.

- Given that depositories would subsidize housing finance in the absence of Freddie Mac and Fannie Mae, federal sponsorship of Freddie Mac and Fannie Mae provides a second best structure that supplies housing finance more efficiently than could the depositories alone.

Depositories receive funding advantages through deposit insurance, access to Federal Reserve Bank liquidity and FHLB advances and have an average cost of funds lower than Freddie Mac and Fannie Mae.

In summary, CBO's 1996 report was deficient in many respects. The methodology used overstated the funding advantage Freddie Mac and Fannie Mae derive from their charters, and the evaluation of consumer benefits understated some components and ignored others. A repeat of these mis-measurements in the new report would render its findings and conclusions without credible foundation. A more accurate approach shows that the current arrangement benefits consumers much more than any funding advantage received by Freddie Mac and Fannie Mae.

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Appendix B

Detailed Analysis of the 2001 CBO Report
Federal Subsidies and the Housing GSEs

The 2001 CBO report contains serious flaws. While the report corrects some of the mistakes of the 1996 study, substantial problems remain and, in fact, several major new errors were introduced. It also introduces a new, inappropriate accounting methodology.

In contrast to the report's expansive view of Freddie Mac's funding advantage, the report is exceedingly narrow with regard to the benefits we bring. As a result, the report overstates Freddie Mac's funding advantage and understates the benefits we bring to America's families.

Overstatement of Funding Advantage

The 2001 CBO report corrects several errors contained in CBO's 1996 analysis. In particular, the report concludes that the funding advantage on long-term callable and noncallable debt are the same and correctly notes that the funding advantage on short-term debt is lower than that on long-term debt. However, serious problems remain with the current analysis, as described below:

Error 1: Long-term Debt Analysis Primarily Based on Single-A Debt

CBO contracted for a report from two academics, Brent Ambrose and Arthur Warga, to analyse the funding advantage on debt.[1] Ambrose and Warga use the Fixed Investment Securities Database ("FISD") to calculate the indirect spreads between GSE securities and banking sector securities. To do this, they selected 70 banking sector institutions for the time period 1995-1999 and calculated the difference between GSE-to-Treasury yield spreads and banking sector-to-Treasury yield spreads. While this is an appropriate data set for calculation of spread information, there are many flaws in the way their report uses the data.

GSE debt is not comparable to A- or A debt. Standard & Poor's ("S&P") issued a report to the Office of Federal Housing Enterprise Oversight in February 1997 providing a "risk to the government" rating of Freddie Mac of AA- based on third quarter 1996 data. This rating was reaffirmed in February 2001. Thus, for the period under analysis, Freddie Mac's "risk to the government" rating was higher than the senior debt ratings of all thrift institutions and all but a handful of bank holding companies, and well above single-A.[2]

[1] Brent W. Ambrose and Arthur Warga, *An Update on Measuring GSE Funding Advantages*, prepared for the CBO, November 6, 2000.

[2] Standard & Poor's, *Final Report of Standard & Poor's to the Office of Federal Housing Enterprise Oversight (OFHEO)*, Contract No. HE09602C, February 1997; and *Federal Home Loan Mortgage Corp.'s Risk to the Government Assigned 'AA-' Rating*, February 27, 2001.

Ratings on Freddie Mac's subordinated debt provide further confirmation that Freddie Mac's debt should be compared to double-A and not single-A rated debt. In March 2001, S&P also rated Freddie Mac's subordinated debt as AA-. Likewise, Moody's Investor Services issued a rating of Aa2.[3]

The Ambrose and Warga analysis includes debt with six rating categories: A-, A, A+, AA-, AA, and AA+.[4] Because of the lower credit rating on A- and A rated debt, yields are commensurately higher on such debt. In fact, Ambrose and Warga report the spread of Freddie Mac and Fannie Mae debt to single-A rated debt was 51 basis points, while the spread to double-A rated debt was only 27 basis points.[5] Because more than half the banking sector firms in Ambrose and Warga's analysis were rated A- or A, combining bonds across these categories gives disproportionately heavier weight to the debt in the lowest rating categories, namely A- and A. The best alternative would have been to examine AA- debt only. Lacking sufficient issues for that, a next best alternative would have been to compute averages for those bonds closest to AA-. For example, averages for A+, AA-, and AA debt could be computed individually, then each average weighted by a third to develop a comparable weighted average.[6] Debt rated A or A- should have been completely omitted from the analysis.

Because the long-term debt spreads reported in Ambrose and Warga are considerably higher than those calculated from spreads between agency and AA industrial fair market yield curves,[7] Freddie Mac obtained the data set used by Ambrose and Warga to determine the source of their overestimate. It is very difficult to generate the identical results, since the selection procedure to determine which issues were included (for either the GSEs or the firms) does not provide a data set that perfectly matches that reportedly used by Ambrose and Warga. However, replication of their study, to the extent possible, indicates that the spread between GSE debt and the debt of banking sector firms with a rating between A- and AA+ is only 43 basis points.[8]

CBO excludes certain data quarters from the analysis. One key assumption made by Ambrose and Warga involves deleting all quarters for which they found only a single

[3] Standard & Poors, *Freddie Mac's Subordinated Debt Securities Rated 'AA-'*, March 14, 2001. Moody's Investors Service, *Moody's Rates to-be-issued Subordinated Debt for Freddie Mac Aa2*, January 17, 2001.
[4] For simplicity, we show S&P rating labels; some debt carried Moody's ratings of comparable credit rating, the five classes being A3, A2, A1, Aa3 and Aa2.
[5] Ambrose and Warga's Table 2.
[6] This method produces a simple average of the three rating categories, rather than an average that is weighted toward the category with a larger number of issues. A simple average is the appropriate measure to have.
[7] Bloomberg's Fair Market Yield Curves (April 2000 average) indicated a 32 basis point spread between AA industrials and agencies on a 20-year maturity. They do not report yields with only GSE debt.
[8] Due to the lack of detail provided in the Ambrose and Warga report, we could not perfectly replicate the results they provide; however, all of the numbers we use are obtained from the analysis most closely following report. Even following the Ambrose and Warga methodology, which we believe to be incorrect, we only obtain a 43 basis point spread, not the 47 basis point spread they show.

banking issue.[9] We disagree with this assumption, particularly for firms with regular issuances of debt. Including all quarters of data results in a spread of 37 basis points including A and A- issues and 30 basis points excluding A and A- issues. Examining only AA- rated debt results in a spread of 27.5 basis points. We strongly believe that the correct methodology would include data from all quarters and exclude A and A- debt issues from the analysis, providing at most a 30 basis point spread.

The matching process used is arbitrary. The Ambrose and Warga methodology involved matching GSE issuances with bank issuances in the same quarter. They did not attempt to control for characteristics of the issuances such as week of issue, size of issuance, or whether the issue preceded or followed a change in the federal funds rate, for example. Trying to accurately compare bank and GSE issuances would have changed their results.

Hence, deleting issues rated below A+ and including all quarters of data, one obtains a 30 basis point spread, and 27.5 basis points if only examining AA- rated debt. Using 30 basis points on long-term debt and 15 basis points on short-term debt provides a weighted average of 27 basis points on debt (assuming 20 percent short-term and 80 percent long-term debt) and a weighted average of 24 basis points (using 40 percent short term and 60 percent long term debt).

Error 2: Report ignores the effect of greater liquidity

The 2001 CBO report assumes that the liquidity inherent in Freddie Mac's securities is solely due to the "implicit guarantee" embedded in our charter, "much as the government guarantee of Treasury securities is often cited as the reason for their liquidity."[10] Liquidity comes, in large part, from scale economies, efficiencies of operations at Freddie Mac and Fannie Mae, and large issue sizes on their debt that would exist even absent the charters.

The fact that Freddie Mac's lower cost of funds does not result solely from its charter is confirmed by the experience of Ginnie Mae. The 1968 creation of Ginnie Mae, which gave the government agency the *explicit* full faith and credit backing of the U.S. government, did not immediately reduce mortgage rates on FHA-insured and VA-guaranteed loans. Rather, over time, the liquidity of the mortgage-backed securities and the efficiency of securitizing FHA and VA loans led to a 0.6 to 0.7 percentage-point decline in rates on these mortgages relative to Treasury yields.[11]

[9] The Ambrose and Warga report states their requirement "that each quarter have at least two banking bond matches." Subsequent correspondence from Brent Ambrose to Freddie Mac indicated that they deleted quarters with less than three banking matches.

[10] 2001 CBO report at 36.

[11] Deborah G. Black, Kenneth D. Garbade and William L. Silber, "The Impact of the GNMA Pass-Through Program on FHA Mortgage Costs," *Journal of Finance*, May 1981, pp. 457-69; and James P. Rothberg, Frank E. Nothaft and Stuart A. Gabriel, "On the Determinants of Yield Spreads between Mortgage Pass-Through and Treasury Securities," *Journal of Real Estate Finance and Economics*, December 1989, pp. 301-15.

Further confirmation comes from Freddie Mac's experience in the mid-1980s of issuing quarter-coupon Mortgage Participation Certificates ("PCs"). Freddie Mac's PCs initially were "whole" and "half" coupon securities (such as 7.0 and 7.5 percent). To accommodate requests from lenders we began issuing PCs with "quarter" and "three-quarter" coupons (such as 7.25 and 7.75 percent). The quarter-coupon PCs carried the same corporate guarantee as other PCs, yet consistently traded at higher bid-ask spreads and failed to generate the liquidity that had already been established in our whole- and half-coupon PCs. Freddie Mac subsequently ceased to issue quarter-coupon PCs. Freddie Mac's experience with quarter-coupon PCs is additional evidence that our charter alone is insufficient to generate liquidity.

The effect of liquidity on security yields is well understood by capital market participants. In a recent report, Salomon Smith Barney compared Freddie Mac and Fannie Mae issues with three large security issuers to partly address the liquidity differential, concluding that the funding advantage on long-term debt, after taking into account liquidity differentials, was in the range of 10 to 30 basis points.[12] Failing to take into account the liquidity that we have created, not from our charter but from our regular market presence and detailed and transparent financial disclosure, is a significant shortcoming of the report.

Error 3: Adoption of a "capitalized subsidy" accounting methodology (and the resultant use of "effective" short term and long term debt)

The capitalized subsidy treatment has never been used by anyone – whether inside or outside the government – to measure either the benefits we bring or our funding advantage. The 2001 CBO report provides little to document the use of this approach. The adoption of this methodology increases the size of the funding advantage by $2 billion. As evidenced in the analysis from Drs. James Pearce and James C. Miller, attached as Appendix C, they find that CBO applied this methodology inappropriately and inconsistently.

In addition, the approach produces anomalous results. For example, the report estimates the "subsidies to debt and MBS" issued by Freddie Mac and Fannie Mae as $9.9 billion in 1998, the same amount in 1999, and $9.7 billion in 2000.[13] In contrast, the flow of mortgage activity was at an all-time record level in 1998 because of the refinance boom. Independent estimates of the volume of new single-family originations place the 1998 market at nearly 50 percent larger than in 2000, and Freddie Mac's purchase volume was 39 percent larger in 1998 than in 2000.[14] How plausible is a method that purports "to

[12] "Quantifying Agency Debt Political Risk," *Bond Market Roundup: Strategy*, pp. 47-51, New York: Salomon Smith Barney, August 4, 2000.
[13] 2001 CBO report at Table 7, first two rows.
[14] Economy.com has estimated that single-family originations were $1.53 trillion in 1998, $1.21 trillion in 1999, and $1.05 trillion in 2000, *Regional Financial Review* at 88, March 2001. The Mortgage Bankers Association of America has estimated single-family originations at $1.51 trillion in 1998, 1.29 trillion in 1999, and $1.02 trillion in 2000. *See* (http://www.mbaa.org/marketdata/forecasts/mffore 0401.html). Likewise, Freddie Mac's new business purchases declined from a record $288 billion in 1998 to $207 billion in 2000. Freddie Mac, *2000 Annual Report* at 90). As another example, the report states that even

capture the total subsidy associated with new credit extended in a given year" if substantial year-to-year changes in credit extensions result in virtually no change in the "subsidy" measure?

In contrast, the "subsidy-flow" calculation, as CBO refers to the alternative methodology, was used by CBO in 1996, by Pearce and Miller (see Appendix A), and by other government studies. Under this methodology, the correct maturity split of debt outstanding is approximately 40 percent short-term and 60 percent long-term for Freddie Mac and Fannie Mae. The 2001 CBO report used 20 percent as its estimate of the share of debt that was short-term, excluding any short-term issuance that was part of interest-rate swap agreements. The relevant funding advantage should reflect the term of the debt at issuance because interest-rate swap agreements do not have a substantive effect on the funding cost of the debt.

Understatement of Consumer Benefits

In contrast to the report's expansive view of Freddie Mac's funding advantage, the report is exceedingly narrow with regard to the benefits we bring. The report makes two additional errors in calculating the benefits resulting from Freddie Mac's and Fannie Mae's activities:

Error 1: 2001 CBO report ignores the effect on loans we have not bought

Freddie Mac and Fannie Mae maintain a full array of institutional arrangements that lower mortgage rates for all mortgage borrowers. All families with a conventional, conforming mortgage loan benefit from our activities, regardless of whether the loan is sold to us or not. The report concedes this basic point and notes, "rates on conforming mortgages obtained from intermediaries that are not GSEs are lower than they otherwise would be because of the competitive presence of the GSEs, benefiting those borrowers."[15] However, they assign this benefit a zero value, claiming that as it comes at no cost to Freddie Mac and Fannie Mae, they should not be credited with benefit. In fact, the report states that Freddie Mac and Fannie Mae hurt other mortgage lenders by forcing them (through size and market power) to receive lower mortgage rates (and hence lower revenues) than they would otherwise. Without Freddie Mac and Fannie Mae to exert influence on behalf of homebuyers, rates on conforming loans held by depositories would be higher. Freddie Mac estimates that these additional savings totaled between $4.0 and $5.0 billion in 2000.[16]

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if it had included the consumer benefit that Freddie Mac and Fannie Mae have on reducing mortgage rates on conforming loans that are retained in lenders' portfolios, the "pass-through" of this additional benefit to families "is actually negative." 2001 CBO Report at 44.

[15] 2001 CBO report at 13.

[16] We estimate that $1.2 - $1.4 trillion of fixed rate, conventional, conforming mortgages are not purchased by Freddie Mac or Fannie Mae. The benefit on those should be measured at 33 - 35 basis points. This adjusts the 22 basis point figure used by CBO to a more accurate 28 - 33 basis points and then adds in a 5 basis point adjustment for the effect in the jumbo market.

The 1992 legislation required CBO to study the "desirability and feasibility of repealing the Federal charters of the Federal National Mortgage Association and the Federal Home Loan Mortgage Corporation, eliminating any Federal sponsorship of the enterprises, and allowing the enterprises to continue to operate as fully private entities."[17] In directing CBO to evaluate the "desirability and feasibility" of these steps, Congress posed six specific questions, one being the effect on housing affordability and availability and cost of homeownership. Since the report admits that we lower rates on all conforming loans, including those that we do not buy, then these interest rates would be higher in the event of charter repeal. Thus, the "desirability" of such action cannot be ascertained without including the beneficial effects that accrue to all conforming borrowers, including those whose loans have not been offered for sale to us.

That mortgage rates are lower on conventional, conforming, fixed-rate loans has been shown in many studies, as noted in the 2001 CBO report. However, Freddie Mac and Fannie Mae's purchase activities also result in lower rates on adjustable-rate mortgages ("ARMs") and jumbo mortgages, both because these loan products are substitutes for conventional, conforming, fixed-rate loans and through our purchases of ARMs.

Because Freddie Mac can access global capital markets more efficiently than other mortgage asset investors, we are able to transfer our funding advantage to borrowers in the markets we serve. Jumbo mortgage rates are subsequently lower because the supply of funds by Freddie Mac and Fannie Mae to the conforming market allows other investors to reallocate additional funds to the jumbo market, enabling jumbo borrowers to benefit indirectly.

Likewise, families who choose ARMs also benefit, both directly from Freddie Mac's purchases of ARM loans and indirectly through the reduction in financing that other investors, such as savings institutions, will need to raise for mortgage loans. The difference between the first-year interest rate on a one-year, Treasury indexed jumbo ARM and on an identical conforming ARM was 36 basis points in December 2000.[18]

These additional consumer benefits, on ARM rates, and jumbo rates, and on fixed-rate conventional, conforming mortgages not purchased by Freddie Mac and Fannie Mae, have been ignored in the report, but are documented in the study by James Pearce and James Miller that was prepared at Freddie Mac's request and provided to CBO.[19]

Error 2: 2001 CBO report understates the jumbo-to-conforming spread

The report concluded that Freddie Mac and Fannie Mae reduce conforming mortgage rates by 25 basis points. The report also estimates that jumbo mortgage rates were 3 basis points lower because of benefits provided by the Federal Home Loan Banks

[17] Federal Housing Enterprises Financial Safety and Soundness Act of 1992 Sec. 1355 (106 Stat. 3672 (1992) (current version at 12 U.S.C. Sec. 4602)).
[18] "Economic Conditions Lead to Less Desirable Adjustable-Rate Mortgages in 2000," Freddie Mac Press Release, January 4, 2001. http://www.freddiemac.com/news/archives2001/arms2000.htm.
[19] James E. Pearce and James C. Miller III, *Freddie Mac and Fannie Mae: Their Funding Advantage and Benefits to Consumers*, January 9, 2001, attached as Appendix A.

("FHLBs") to depositories. Thus, the report found a 22 basis point spread between jumbo and conforming mortgage rates. However, the report states (at 34) that this may be an "overestimate" of the differential, and in its sensitivity analysis assumes a variation in the jumbo-to-conforming spread from 12 to 27 basis points, after accounting for the 3 basis point effect that CBO believes the FHLBs have on reducing jumbo rates (at 30).

The report relies on the paper prepared by David Torregrosa of CBO, *Interest Rate Differentials Between Jumbo and Conforming Mortgages, 1995-2000*, May 2001. Given the many quality control issues with the Federal Housing Finance Board's ("FHFB") data documented by Hendershott and Shilling and by Cotterman and Pearce (and noted briefly in Torregrosa's report, at 16), the failure of Torregrosa to conduct any additional edit checks on the raw data has surely biased the results.[20] The study assumes that the FHFB's new procedure that "screens out" observations where the contract rate is more than 100 basis points below the previous month's average sufficiently cleanses the data (at 16). This new edit had not been implemented by the FHFB at the beginning of the period that Torregrosa analyzes, but rather at a later date. Thus, during 1995, six percent of the loan records fail the contract rate "screen" that the FHFB currently employs but which was not in use during 1995. Clearly, this may explain the especially anomalous result reported for the first quarter of 1995 for which Torregrosa reports no statistically significant difference between jumbo and conforming mortgage rates, contrary to all other analyses.

Further, while the current contract rate screen will identify some of the data quality problems, many will remain uncorrected, especially in an environment with substantial amounts of "hybrid" ARM lending[21] and/or a period where the yield curve is relatively flat. The differential between the initial interest rate on a hybrid ARM and on a fixed-rate loan may well be under 100 basis points because hybrids are priced further out the yield curve and have higher initial rates than traditional annually adjusting ARMs; the edit screen will not identify cases for which hybrid ARMs are reported as fixed-rate loans. Given the much higher share of ARMs in jumbo markets, this data problem can easily impart a significant downward bias in estimates of the jumbo-to-conforming spread on fixed-rate loans. To illustrate the importance of this, hybrid ARMs with an initial period of 3-or-more years represented about one-half of the ARMs reported in the FHFB data over 1995-2000 (annually, it varied from 42 to 60 percent). The differential in interest rates between fixed-rate loans and 3/1 ARMs was 75 basis points or less for much of this period, and between fixed-rate loans and 5/1 ARMs was generally under 50 basis points.[22]

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[20] Robert F. Cotterman and James E. Pearce, "The Effects of the Federal National Mortgage Association and the Federal Home Loan Mortgage Corporation on Conventional Fixed-Rate Mortgage Yields," in *Studies on Privatizing Fannie Mae and Freddie Mac*, ed. by U.S. Department of Housing and Urban Development, at 97-168 (1996); Patric H. Hendershott and James D. Shilling, "The Impact of the Agencies on Conventional Fixed-Rate Mortgage Yields," *Journal of Real Estate Finance and Economics*, Vol. 2, at 101-115 (1989).

[21] Hybrid ARMs have an initial interest rate that is fixed for 3, 5 or other initial periods before adjusting at an annual frequency; the industry refers to these, for example, as "3/1", "5/1".

[22] See Michael Schoenbeck, "Payment Options Proliferate Among ARMs," *Secondary Mortgage Markets*, October 1997, at 2; Michael Schoenbeck, "ARM Borrowers Match Loans to Their Uncertainty Tolerances," *Secondary Mortgage Markets*, April 1999, at 26-7; "Demand for ARM Loans Increase as Mortgage Rates Rise and Lenders Offer New Products," Freddie Mac Press Release, December 29, 1999;

These biases explain why the estimates presented in Torregrosa's report tend to be low relative to other estimates for a similar time period. Estimates by Pearce over a comparable period tend to average about 5 basis points higher than Torregrosa's.

Without recognition of the inherent bias in the Torregrosa report, the 2001 CBO report reports a point estimate and sensitivity range for the jumbo-to-conforming spread that is not only low, but is surprisingly inconsistent with Torregrosa's results. Torregrosa reports a mean spread over the sample period of 23 basis points (Table 3 of Torregrosa's paper) but the report uses a point estimate of 22 basis points. Torregrosa gives a range of 18 to 25 basis points "depending on the estimation technique and the data sample" (at 4), yet the 2001 CBO report conducts sensitivity analysis with a jumbo-to-conforming spread of 12 to 27 basis points.

Other studies cited estimate the jumbo-to-conforming direct benefit to consumers at about 30 basis points. For example, Pearce states "...if I were forced to adopt a single number as "the" measure of the differential, I would continue to use 30 basis points."[23]

SUMMARY

The report's conclusions depend on arbitrary assumptions and specific point estimates, rather than more appropriate ranges, that result in substantially overstating the funding advantage, understating the jumbo-to-conforming spread, and failing to account for the interest-cost savings accruing to all conforming borrowers, as well as to ARM and jumbo borrowers.

The following table shows that by simply correcting four fundamental flaws in the 2001 CBO report, the conclusions of that report are completely reversed. The table's first row begins with CBO's "capitalized subsidy" estimate. Freddie Mac was unable to reproduce the methodology because of insufficient documentation in the 2001 CBO report. Further, as indicated by the critique of Drs. Pearce and Miller, contained in Appendix C, the method is inappropriate. Instead, the table starts in the third row with the "flow subsidy" estimate based on CBO's 1996 analysis.[24]

The 2001 CBO report uses a long-term debt funding cost advantage of 47 basis points, which is 18 percent higher than the upper end of external estimates (reported in the Pearce and Miller report at 10 to 40 basis points) and 57 percent higher (relative to 30 basis points) than can be obtained from the FISD data including all quarters of data and excluding A and A- rated debt issues. Within the framework of CBO's 1996

"Economic Conditions Lead to Less Desirable Adjustable-Rate Mortgages in 2000," Freddie Mac Press Release, January 4, 2001.

[23] James Pearce, "Conforming Loan Differentials: 1992-1999," November 22, 2000, Welch Consulting.

[24] The "flow subsidy" estimates were included in CBO's draft of its May 2001 report, which was forwarded to Freddie Mac for comment by CBO. CBO removed the "flow subsidy" estimates from its published report. Nonetheless, we were able to replicate CBO's 1996 methodology and obtain the same "flow subsidy" estimates that CBO had included in its draft.

methodology, the overestimate of the funding advantage on long-term debt bloats the funding advantage by about $1.2 billion.

The correct maturity mix of debt outstanding is approximately 40 percent short-term and 60 percent long-term for Freddie Mac and Fannie Mae. The 2001 CBO report uses 20 percent short-term and 80 percent long-term, which inflates the estimated funding advantage because the funding advantage on short-term debt is only about one-half of the amount on long-term debt (15 basis points versus 30 basis points). This correction reduces Freddie Mac and Fannie Mae's funding advantage by about $1.0 billion.

There are two major errors that understate the value of consumer benefits. One is the understatement of the jumbo-to-conforming spread. Using a spread of 30 basis points, the midpoint of the range reported by Pearce and Miller, on fixed rate, conventional, conforming mortgage loans purchased by Freddie Mac and Fannie Mae adds about $1.0 billion to consumer benefits, within the framework of CBO's 1996 methodology.

The second error is the failure to include the cost savings Freddie Mac and Fannie Mae provide to all fixed rate, conventional, conforming borrowers, regardless of whether or not their loan is purchased, which adds about $4.0 billion to consumer benefits. The full effect in terms of interest cost savings in the fixed-rate, conventional, conforming mortgage market is then $10.0 billion. Adding the $2 billion estimated reduction in origination costs resulting from securitization increases the consumer benefits to $12.0 billion.[25] The "corrected" benefits to consumer measure is substantially above any "subsidy" received by Freddie Mac and Fannie Mae.

The accompanying table summarizes the above discussion.

[25] Steven Todd, "The Effects of Securitization on Consumer Mortgage Costs," *Real Estate Economics*, Spring 2001, 29:1, at 29-54.

CORRECTING THE 2001 CBO REPORT:
The Benefits Provided by Freddie Mac and Fannie Mae
Outweigh the Benefits Derived from their Charters
Results Year-End 2000 (dollars in billions)

	Freddie Mac and Fannie Mae Advantages			Benefits Provided to Consumers
CBO "capitalized" funding advantage	$9.6		CBO "capitalized" consumer benefit	$6.7
Less: adjustment for new method	(1.9)		Less: adjustment for new method	(1.7)
CBO "flow" funding advantage	7.7		CBO "flow" consumer benefit	5.0
Error: Inclusion of A and A-minus debt	(1.2)		Error: Understate jumbo-to-conforming spread	1.0
Error: Overstate long-term debt mix	(1.0)		Error: Fail to apply to all conforming fixed-rate	4.0
CBO "flow" estimate corrected for two errors	5.5		CBO "flow" estimate corrected for two errors	10.0
Plus: tax and regulatory benefits	0.9		Plus: consumer benefit of reduction in origination fees	2.0
Total advantages	6.4		Total benefits	12.0
Note: Funding advantage estimate does not include any correction for liquidity of debt nor for overestimate of MBS funding advantage. After correction for two errors, estimate is within Pearce and Miller's estimated range of $2.3-7.0 billion.			Note: Consumer benefit does not include effects of Freddie Mac and Fannie Mae on reducing ARM rates and jumbo rates. After correction for two errors, consumer benefit estimate is within Pearce and Miller's range of $8-23 billion.	

Response to CBO's Draft Report: Federal Subsidies and Housing GSEs[1]

by

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The Congressional Budget Office (CBO) has released a draft of its forthcoming study on Freddie Mac, Fannie Mae, and the Federal Home Loan Bank System. The forthcoming study updates a 1996 CBO study[4] of the benefits Freddie Mac and Fannie Mae receive through their ties to the government and the benefits these corporations provide to families. Since the 1996 study was released, Freddie Mac, Fannie Mae, and other analysts have criticized the CBO's methodology and conclusions. We presented a number of criticisms of the 1996 study in a document released in January of this year. [5]

We are pleased that in its draft report the CBO reflects favorably on some of the comments on its previous assessment of the nexus between the federal government and the housing GSEs. For example, we (and others) noted that in its 1996 report CBO overestimated the funding advantage to Freddie Mac and Fannie Mae in a number of respects. Among those was its treatment of all Freddie Mac/Fannie Mae debt as long-term, ignoring the lower funding advantage on short-term debt (Pearce-Miller, pp. 5 and 27). The draft accepts

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[1] Congressional Budget Office, "Federal Subsidies and Housing GSEs," draft dated April 25, 2001.
[2] Welch Consulting; 111 University Drive, East; Suite 205; College Station, Texas 77840.
[3] Law and Economics Consulting Group; 1600 M Street, N.W.; Suite 700; Washington, DC 20036.
[4] Congressional Budget Office, "Assessing the Public Costs and Benefits of Fannie Mae and Freddie Mac," 1996.
[5] James E. Pearce and James C. Miller III, "Freddie Mac and Fannie Mae: Their Funding Advantage and Benefits to Consumers," Freddie Mac, January 9, 2001. CBO's draft report specifically acknowledges taking such comments into account, although it states that "disagreements remain on several fundamental issues" (p. 9).

this point (p. 52). We also criticized the use of separate estimates of the funding advantage on callable and noncallable debt. CBO now accepts the proposition that the funding advantage on long-term debt should be estimated from spreads on noncallable debt only (p. 25). These modifications are potentially important. If CBO had used the updated report's methodology about appropriate debt spreads in its 1996 report, it would have found that Freddie Mac and Fannie Mae passed through all of the benefits of sponsorship to homeowners.

Unfortunately, even though CBO accepted some valid criticisms of its previous work, its analysis still contains errors. For example, in estimating the funding advantage on long-term debt, CBO included spreads on debt with credit ratings that are lower than the AA- "risk to the government" credit rating held by Freddie Mac and Fannie Mae. This error is a departure from the 1996 report, which based the estimated debt funding advantage on GSE-AA spreads. Moreover, CBO continues to make many of the same mistakes we pointed out earlier, and in the application of principles they often interpret the evidence incorrectly or adopt the wrong bases for their estimates. Consequently, we believe that relying on this report will lead to bad policy with respect to mortgage markets.

Our concerns with the draft report fall into three basic categories. First, with respect to the adoption of principles and the application of those principles to available data, we believe CBO makes numerous mistakes, the overall effect of which is to inflate estimates of the alleged subsidies to the GSEs and to deflate estimates of benefits to consumers. We deal with such issues in the first section of this response.

Second, while we found the revised accounting methodology (replacing what the draft report calls "subsidy-flow" calculations with "capitalized subsidy" calculations) of interest, we believe that its application here is inappropriate and misleading. The new methodology also inflates the report's estimates of benefits accruing to the GSEs.

Third, we believe the "model" used by CBO to address the issue of benefits is totally incorrect. In CBO's world, the federal government hands over to the GSEs certain benefits, which the GSEs then distribute to intended beneficiaries (consumers of mortgages), minus a significant service charge. CBO concludes that Freddie Mac and Fannie Mae hold back one dollar for every two dollars they pass on. This formulation is much too narrow and unrealistic, for it ignores the efficiencies generated by the GSEs and the effects of the GSEs in making the mortgage market more cost-effective. As we pointed out in our earlier work (pp. 30 - 35), the correct way to analyze the role of the GSEs is to include the whole panoply of effects brought about by the unique institutional environment created by the current GSE-government nexus.

A concluding section summarizes our response and indicates what useful inferences might be drawn from the draft report.

Technical Deficiencies in Principles and Their Application

As a threshold matter, there is little justification for *assuming* that all the difference between Freddie Mac and Fannie Mae costs on the one hand, and those of "comparable" institutions on the other, is due to advantages conferred on the two corporations by statute. Could Freddie Mac and Fannie Mae be particularly efficient in what they do? Could there be economies of scale or scope that lead to cost advantages beyond those conferred by the charter? If so, would none of these characteristics remain with the corporations if federal sponsorship were withdrawn? Because the draft report treats all of Freddie Mac's and Fannie Mae's competitive strengths as derived from their charters, its methodology imparts an upward bias on the advantages conveyed by the GSE-government nexus.

An example of this phenomenon is the contribution of the liquidity of Freddie Mac and Fannie Mae debt and mortgage-backed securities to the overall funding advantage. Freddie and Fannie have large volumes of debt and MBS outstanding. This volume adds to the securities' liquidity, a characteristic that raises their value in the marketplace. GSE status is responsible for some of the issuance volume of Freddie Mac and Fannie Mae securities, but Freddie and Fannie would continue to be large issuers if they were fully privatized. Thus, debt of fully private firms who are also large issuers of securities should be given relatively high weight in comparisons used to estimate the funding advantage attributable to the GSEs' charters.

We note that the draft report concludes that the major "source" of the funding advantage is the "perception" of a government guarantee on GSE debt that "appears to outweigh the explicit disavowal of responsibility in every prospectus for GSE securities" (p. 19). But GSE markets are "made" by sophisticated market participants who know very well there is no legal obligation of the U.S. government to back GSE debt. Market participants might believe it likely the federal government would step in should there be a catastrophic failure, but the same argument would apply to other major financial institutions. Indeed, the argument might apply to Freddie Mac and Fannie Mae even if the charter were removed.

Although the draft report accepts our criticism of the 1996 report for treating all debt as long-term debt, it bases its estimates on *"effective"* short-term debt, which is significantly smaller than recorded short-term debt (pp. 27-28). There is an element of truth to this argument, and in some circumstances effective short-term debt is the appropriate measure. Under the "subsidy flow" approach of the 1996 report, the actual short-term debt outstanding is appropriate. The CBO's justification of its choice (footnote 27 on page 28) is

flawed in that it assumes that GSEs maximize their funding advantage rather than shareholder value.

In estimating the borrowing advantages of the GSEs, the CBO report compares GSE long-term debt costs with debt issues rated A or AA (pp. 6 and 22-23). Indeed, some of the debt is rated as low as A-minus, a full three rating categories below AA-minus. There is little justification for comparing GSE costs with costs of A-rated institutions. Private institutions such as Standard and Poor's rate Freddie Mac and Fannie Mae on a stand-alone basis as AA-. Standard and Poor's rated both firms AA- in 1997, and they reaffirmed these ratings in February 2001. Inclusion of firms with single A and A-minus ratings in establishing the GSE rate differential inflates the estimated GSE funding advantage by 10 to 20 basis points, depending on how the analysis is done.

Similarly, the CBO understates the benefits to mortgage borrowers in a manner similar to the treatment of this subject in the 1996 report. The draft report uses the jumbo-conforming spread as the measure of Freddie Mac's and Fannie Mae's effect on interest rates. For reasons explained in our January report, we believe the draft report's assumption of a 25 basis-point benefit on conforming mortgages (p. 42; based on the jumbo-rate differential) is considerably on the low side (Pearce-Miller, pp. 27-30).

In all its conclusions, the draft report is much too willing to supply point estimates. For reasons explained in our previous comments (for example, p. 18), for many of the issues addressed in the draft report there is no one apparent "best" number to utilize. Therefore, expressing estimates of this sort as ranges provides a more appropriate sense of the limits of available data. To do otherwise would convey a sense of precision that is not justified. While we note the draft report's incorporation of sensitivity analysis, it alone does not convey to the reader the inherent imprecision of the task being addressed.

The report seeks to estimate the advantages derived by the GSEs from their particular regulatory environment. Although noting that Freddie Mac and Fannie Mae are subject to extensive federal regulation (albeit regulation that is different from other financial institutions), the report makes no attempt to quantify the effects of those differences. In particular, while noting that the GSEs must meet certain social goals, such as increased home ownership by citizens with low incomes (p. 16), in omitting such "costs" to the GSEs the draft report inflates the estimate of benefits stemming from the GSE-government nexus.

Because the draft report *assumes* that all benefits that do not go to mortgage borrowers are retained by the housing GSEs (p. 39), any overestimation of gross benefits or underestimate of benefits to borrowers imparts an upward bias to the estimate of benefits derived by the GSEs.

Finally, we note with concern the use, and potential for misuse, of certain emotive terms in the draft report. The CBO uses the term "subsidies" in the title and throughout the text. Most readers would presume the term to connote a direct outlay of funds from the federal treasury. This, of course, is not the case and presumably not what is intended. But confusion over that matter will persist unless clarified, preferably by using a more descriptive term, such as "benefits" or "funding advantage." The draft report also tosses around provocative terms such as "tacitly colluding duopolists" (p. 39) and "market power" (p. 40) without any clarification. This terminology could lead to unsubstantiated claims and detract from the integrity of the work.

Inappropriateness of the Accounting Methodology

In the draft report, CBO adopts a "capitalized subsidy" accounting methodology, to replace the "subsidy-flow" calculations used in its 1996 report (p. 29). Although the draft report does not describe all of the sources and assumptions, it is clear that the approach is to capitalize the entire stream of benefits to mortgage borrowers and to the GSEs upon execution of the loan transaction. Thus, CBO assumes an average life of loans, including both new loans and loan turnovers, and calculates the present value of the stream of benefits. Not surprisingly, this method yields much higher gross benefit estimates than the previous methodology, which simply applied the benefit differential to the current stock of securities and loans outstanding.

CBO justifies its decision to change methodology on its conclusion that the approach utilized in its 1996 report "is inconsistent with how costs for explicit guarantees are recognized in the federal budget and in federal financial statements prepared according to generally accepted accounting principles (GAAP)" (p. 30). There is much to say for having decision makers understand the full impact of irreversible decisions (public as well as private). Indeed, one of us (Miller) has been at the forefront of arguing for changes such as those incorporated in the Credit Reform Act of 1990. This is not the same kettle of fish, however.

First, the benefits conveyed to mortgage borrowers and the GSEs are not in the form of a(n explicit) guarantee. The GSEs themselves provide the guarantee. It might be appropriate for them to account for guarantees on their books in present-value terms, but that is not the same as requiring the benefits to be capitalized each year.

Second, there is the matter of the common-sense understanding of the way benefits work. Under the CBO (revised) methodology, a mortgage borrower who had benefited from lower loan rates received a one-time "shot" of benefits when the loan was made, *but benefits not one iota each succeeding year.* Clearly, neither mortgage borrowers nor GSEs conceptualize the benefits of the GSE-government nexus in those terms.

Third, using the earlier "subsidy-flow" approach avoids anomalies. For example, under the CBO's "capitalized subsidy," any time a GSE experienced a marked contraction in portfolio, its subsidy could go "negative." Or, when its portfolio expanded a modest proportion, the estimated subsidy would increase dramatically. The decision to vary some parameters from year to year while keeping others fixed may contribute to these fluctuations. For example, loan and security activity varies from year to year, while discount rates, spreads, and average lives of mortgages do not. We are not taking issue with the specific calculations (some of which are not outlined in sufficient detail for us to make an informed judgement) or the desirability in appropriate circumstances of expressing streams of benefits and costs in present value terms, we believe the "capitalized subsidy" approach utilized in the draft report is inapplicable to the task at hand.

Inappropriateness of Zero-Sum, Pass-through Model

The major failing of the draft report has to do with the model it *assumes* to be appropriate. The establishment of the housing GSEs precipitated a number of changes in housing markets that are not captured by the model CBO utilizes. The draft CBO report assumes that private institutions in the mortgage market would provide all the services that Freddie Mac and Fannie Mae currently provide if Congress were to withdraw federal sponsorship from these two corporations. The only difference that homeowners would notice would be a 22 basis-point increase in interest rates. This ignores the added liquidity that Freddie Mac and Fannie Mae bring to the mortgage market and the much higher availability of fixed-rate loans in the conforming market than the jumbo market.

What CBO is saying, in effect, is that the federal government gives the GSEs "subsidy," which they are supposed to pass on to consumers (mortgage borrowers). It's a closed, zero-sum model. The GSEs never create value, they are merely conduits for the "subsidy." This, of course, runs altogether counter to the original rationale of the GSEs – to increase liquidity in mortgage markets and thereby lower costs and increase mortgage availability.

The CBO model presumes that any difference between an independent estimate of benefits bestowed by the federal government and an independent estimate of benefits flowing to consumers is a measure of the benefits flowing to, and retained by, the GSEs. What if, as we could reasonably construct, the estimate for consumer benefits *exceeded* the estimate for gross benefits from the federal government? Would we then have to conclude that the GSEs were *subsidizing* consumers?

The more appropriate approach is to count all of the impacts – positive and negative – associated with the current institutional arrangement. To do otherwise causes CBO to miss some of the more salient features of the current

mortgage market.[6] For example, under our approach, GSE activity reduces interest on conforming mortgages they don't securitize and on non-conforming mortgages – a source of considerable benefits to consumers. CBO's model excludes such considerations and therefore underestimates consumer benefits.[7]

Finally, because of its myopic model, CBO fails to recognize that to the extent that ("subsidized") mortgages may draw funds from and increase interest costs elsewhere in the economy, such effects will be minimized by retaining the current institutional arrangement (Pearce-Miller, pp. 33-34).

Concluding Remarks

Although CBO's draft report incorporates important improvements in methodology and data, it is flawed, perhaps fatally, by the misapplication of principles, by the adoption of an inappropriate accounting methodology, and by a stubborn adherence to a closed, myopic model of the benefit generation and transmission process. In almost every case, the deficiencies lead to an inflation of the benefits flowing to the housing GSEs and a deflation of the benefits received by consumers.

But there is some common ground. In our report published earlier this year, we concluded that benefits to Freddie Mac and Fannie Mae ranged from $2.3 billion to $7.0 billion for 2000 (Pearce-Miller, p. 1). Compare now Table B-1 in CBO's draft report with respect to 2000: taking the annual subsidy, adjusting for new technical assumptions and subsidy rates, and excluding the value of tax and regulatory exemptions and the FHLB subsidy (for consistency purposes) yields a comparable CBO (2000) estimate of $7.7 billion, which is just outside our range. The figure can be brought within our range by accepting some technical modifications to the procedure used to estimate the spread on long-term debt.[8]

The truly significant differences pertain to estimates of benefits to consumers. Our report concluded those benefits ranged from $8.4 billion to $23.5 billion per year. The draft report concludes that benefits to consumers total only $7.0 billion per year (p. 1), some $1.4 billion less than the lower end of our

[6] CBO (pp. 48-49) misrepresents the approach we recommend by suggesting that if we calculated that the GSEs passed on more than a dollar for each dollar they held back, the current system would pass some sort of benefit-cost test. But that is mixing their model with ours. In our model, the benefits to the GSEs are independent of the benefits to consumers. The current institutional arrangement allows both to benefit substantially. It is a positive-sum arrangement.

[7] CBO also alleges that these effects net out, since the rate concessions by other financial institutions are a "cost" to them (p. 50). This ignores the role of competition in providing a spur to cost-cutting and innovation.

[8] The draft uses a long-term debt spread of 47 basis points. Analysis by Pearce shows that removing an ad hoc restriction—deleting quarters with a single banking sector issuance—in the consultants' procedure yields a spread of 37 basis points. This calculation uses the same data as the CBO consultants, and it uses the same universe of comparator firms, including those rated A and A-. If the long-term debt spread were 37 basis points, the top end of the CBO range using the 1996 methodology would be within the Pearce-Miller range of $2.3 to $7.0 billion.

range of estimates. What causes this discrepancy? By and large it is CBO's refusal to look beyond its myopic "flow-through" model. In the agency's view, benefits are received by the housing GSEs and some portions are passed on to consumers. This short-sightedness causes CBO not only to miss some of the most dynamic aspects of the mortgage market but to undercount benefits consumers all across America are realizing each and every day.