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A NARRATIVE ANALYSIS OF MORTGAGE ASSET PURCHASES BY FEDERAL AGENCIES

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ABSTRACT

This paper provides a narrative analysis of regulatory policy changes affecting the purchases and holdings of mortgages and related securities of five US government entities over the 1968–2014 period. We focus on federal government policies that aim to influence the allocation and/or volume of the supply of residential mortgage credit. We use contemporary primary sources and various institutional histories to identify significant policy interventions, to document their economic and regulatory context, surrounding motives, and pertinent timing, as well as to quantify projected impacts on agencies' mortgage holdings. Finally, we classify each significant policy change as either "cyclically motivated" or "unrelated to the business and/or financial cycle."

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A Online appendix is available at http://www.nber.org/data-appendix/w23165

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1 Introduction

This paper provides a narrative analysis of regulatory policy changes affecting the purchases and holdings of mortgages and related securities of five US government entities, and their policy relevant histories. We focus on federal government policies that aim to influence the allocation and/or volume of residential mortgage credit supply. We use contemporary primary sources and various legislative and institutional histories to identify significant policy changes affecting government agencies' authorized or mandated volumes of commitments to purchase mortgages, net purchases, and retained mortgage portfolios. We use an array of primary sources to document the economic and regulatory context for each major policy change, including the pertinent timing of events as well as the purported and discerned motives. We also quantify the projected impacts of policy changes on agencies' potential ability to purchase mortgage assets based on ex ante balance sheet data and estimates of congressional staff, market analysts, regulators, and agency executives. Each significant policy change affecting agencies' permissible purchases and holdings of mortgages is classified as either "cyclically motivated" or "unrelated to the business and/or financial cycle" (for short, "non-cyclically motivated").

The documentation and classification of housing credit policy interventions is intended as an input for studying their use and impact. In a companion paper, Fieldhouse, Mertens, and Ravn (2017), we use the policy changes and the narrative classification to analyze the impact of changes in government purchases and mortgage holdings on mortgage lending, interest rates, residential investment, home prices, and on other financial indicators and macroeconomic aggregates.

We focus on five government agencies that have actively participated in mortgage asset markets: the Federal National Mortgage Association (FNMA, or Fannie Mae), Federal Home Loan Mortgage Corporation (FHLMC, or Freddie Mac), Government National Mortgage Association (GNMA, or Ginnie Mae), Federal Reserve, and US Treasury Department. The span of interest for significant policy changes is 1968–2014, although the history of FNMA is traced back to its Great Depression origins in an accompanying online appendix to provide broader context regarding its charter, public mission, and the evolution of US federal housing credit policy.

The remainder of the paper is organized as follows. Section 2 provides an historical overview of US federal housing credit policy institutions and trends. Section 3 provides a general overview of the methodologies and principal data sources used in compiling the narrative histories of the relevant agencies and policy changes. Section 4 followed by a chronological narrative analysis for each of the agencies. Section 5 presents the end result of the narrative analysis, which consists of a time series of significant federal housing credit policy innovations, along with our projected annualized impact on each agency's mortgage holdings (in nominal dollars), determination of the policy change's pertinent timing, and classification of the policy as cyclically or non-cyclically motivated.

2 Historical Overview of Institutions and Policies

To provide a broader context for the discussion of individual policy changes, we first provide an discussion of the origins and evolution of the housing agencies.

The origins of present day US federal housing credit policy stem from policy responses intended to ameliorate the collapse of mortgage credit and resuscitate the housing market during the Great Depression. The Depression was led by a sharp and sustained downturn in housing starts, which plunged to a low of under 100,000 in 1933, down roughy 90% from a peak of over 900,000 in 1925 (Leamer (2007)). Banking panics, falling incomes, and the prevailing terms of mortgage contracts contributed to a severe mortgage credit crunch and unprecedented foreclosure crisis. Before the Great Depression, almost all mortgages were short-term loans of only up to 5-6 years, required large down payments, with loan-to-value ratios (LTVs) not exceeding 60%, and were not self-amortizing; borrowers would take out a new mortgage to make their final ballon principal repayment, but this financing system imploded when panicked or failing banks stopped making new loans.

The first major federal intervention in home mortgage markets was the 1932 creation of the Federal Home Loan Bank System (FHLBS), which was modeled after the Federal Reserve System as a liquidity backstop for mortgage lenders; the FHLBS consisted of twelve regional Federal Home Loan Banks (FHLBanks), a governing Federal Home Loan Bank Board, and private mortgage lenders as members. The FHLBanks were chartered to facilitate and stabilize mortgage lending by providing liquidity via wholesale loans to member institutions, secured by members' mortgages. Membership was mandatory for federally chartered savings and loan associations (S&Ls) and voluntary for other institutions making long-term home mortgage loans.

In response to the foreclosure crisis, Congress established the Home Owner's Loan Corporation (HOLC) in 1933 to refinance mortgages on attractive terms and to purchase foreclosed properties. One year later, the Federal Housing Administration (FHA) was created to stimulate the construction sector and to improve housing standards. Qualifying borrowers could obtain an attractive FHA-insured loan from a private mortgagor to purchase a home, while qualified lenders could file claims with the FHA if a borrower defaulted, thereby transferring credit risk to the federal government. In 1935, the Reconstruction Finance Corporation (RFC) incorporated the RFC Mortgage Company, principally to purchase FHA-insured mortgages. Through the statutory terms for HOLC and FHA-insured mortgages, Congress transformed the norm for mortgage contracts to closely resemble today's dominant long-term fixed-rate self-amortizing mortgages.[1]

[1] HOLC loans allowed higher LTVs of up to 80%, were self-amortizing over a longer 15 year maturity (later revised to 25 years), and fixed interest rates were capped at 5%. Loans limits were set at $14,000, a relatively modest size at the time. Similarly, FHA-insured loans initially imposed maximum LTVs, loan maturities, interest rates, and loan values of 80%, 20 years, 5%, and $16,000, respectively.

In 1938, the Federal National Mortgage Association was established and authorized to purchase and support a secondary market for FHA-insured mortgages. Congress had tried, unsuccessfully, to induce the incorporation of legally privileged private national mortgage associations, authorized by the National Housing Act of 1934; after several years of private sector inaction, FNMA was chartered a wholly owned subsidiary of the RFC, which also provided Fannie's initial capitalization.

The Servicemen's Readjustment Act of 1944 (or "GI Bill") established the Veterans Administration (VA) mortgage guarantee program, which allowed veterans to obtain mortgages with very low down payments. The program was intended as a cheap alternative reward to a cash bonuses for veterans, as well as to reinvigorate housing construction.[2] The RFC Mortgage Company expanded secondary market support to VA mortgages, and after its termination, Fannie was rechartered and authorized to support a secondary market in VA mortgages in 1948. The Korean GI Bill extended the home loan benefit to Korean War vets, setting precedent that eligibility would be extended following every major subsequent conflict or deployment.

The National Housing Act of 1954 rechartered a nearly bankrupted Fannie Mae, turning it into a mixed-ownership corporation by requiring mortgagee counterparties purchase stock, and authorized Fannie to issue debt, subject to leverage constraints. The bill envisaged an eventual full privatization. The Housing and Urban Development Act of 1968 split FNMA into a quasi-private Fannie Mae and a government-owned Government National Mortgage Association. The new shareholder-owned Fannie Mae assumed secondary market operations, but retained the ability to borrow from the Treasury—perceived as an implicit government guarantee. Ginnie Mae assumed the other functions, which largely entailed cyclically motivated purchases or purchases supporting difficult-to-market FHA/VA mortgages with targeted policy objectives. HUD fully administered Ginnie and retained considerable regulatory authority over Fannie.

The 1970s ushered in the ascendence of government-sponsored secondary mortgage markets. Following the 1969 credit crunch, the Emergency Home Finance Act of 1970 authorized Fannie Mae to expand its activities from dealing solely in FHA/VA mortgages to the much larger conventional mortgage market. That Act also created the Federal Home Loan Mortgage Corporation to create a companion secondary market for conventional mortgages in support of the S&Ls. Ownership and regulation of Freddie was placed with the FHLBS. Freddie was authorized to issue debt securities and to sell MBS issued against pools of FHA/VA mortgages. In February 1970, GNMA issued the first publicly traded pass-through securities, backed with interests in pools of FHA/VA mortgages, with timely payment explicitly backed by a government guarantee. In 1971, Freddie started a program of pass-through securities ("participation certificates") backed by conventional mortgages, with default risk guaranteed by Freddie.

[2]Subject to eligibility requirements, veterans enjoyed a limited guarantee on loans used for the purchase or construction of residential property, or home repairs and improvement; the VA would pay the private lender a portion of losses in the event that a veteran defaulted on a guaranteed loan.

Freddie's MBS were largely sold to third parties, so its retained portfolio—primarily used for MBS pooling inventory—remained small relative to Fannie's through the 1980s. Fannie's greater retained portfolio and interest rate risk exposure led to large losses in the early 1980s. The Reagan administration's plans to fully private both GSEs were delayed while Fannie's balance sheet was recovering, aided by accommodating tax and balance sheet policies. A deregulatory regime tried to help the thrift industry and Fannie grow their way back to health, exacerbating the subsequent S&L crisis, which again delayed any attempt at privatization.

Amidst the S&L crisis and public resolution of failed thrifts, the Financial Institutions Reform, Recovery, and Enforcement Act of 1989 expanded the GSEs' secondary mortgage market objectives to promote housing for low- and moderate-income borrowers. The Act also converted Freddie into a publicly traded shareholder-owned corporation, transferring regulatory authority to HUD. Congress also diverted FHLBank earnings to affordable housing goals and repaying thrift resolutions; this action had the unintended consequence of pressuring the FHLBS to expand membership and increase earnings, via leveraged balance sheet expansion into MBS. The Federal Housing Enterprises Financial Safety and Soundness Act of 1992 established minimal capital requirements for the GSEs and mandated that HUD set and enforce affordable housing goals. The GSEs slowly began expanding into higher LTV mortgages and subprime loans that fulfilled affordable housing goals.

The 1990s and early 2000s also saw considerable balance sheet growth of Fannie and Freddie largely unrelated to deliberate federal policy changes. After publicly listing, earnings pressure drove Freddie to exploit the profitability of balance sheet expansion, and its retained portfolio began catching up with Fannie (Greenspan (2005)). The GSEs' automated underwriting systems became the dominant means used by originators, guaranteed that their mortgages could easily be sold to secondary markets, helping the GSEs gain market share. Low interest rates triggered a massive mortgage refinancing wave, which Fannie and Freddie capitalized on. And Fannie and Freddie successfully courted and expanded debt issuance to foreign institutional investors, aided by a falling supply of Treasuries. FHLBank programs were also authorized for purchasing whole loans from members, creating a competing secondary market for their members.

Accounting scandals in the early 2000s, however, prompted greater regulatory oversight of the GSEs, capital surcharges, and portfolio caps, contributing to the declining shares of agency mortgage holdings and guaranteed mortgage debt in the mid-2000s. The GSEs' purchase and securitization activity also slowed with the end of the refinancing boom in 2003. But the explosion of subprime and alt-A mortgage lending and private-label MBS issuance was the greatest factor behind agencies' falling market shares.

Government agencies rapidly regained and then surpassed their previous market share highs as the housing market and private mortgage lending collapsed ahead of and during the Great Recession. The FHLBanks effectively served as an alternative discount window (on more favorable terms than the Fed), and saw lend-

ing activity and mortgage holdings rise sharply. Fannie and Freddie were heavy-handedly reminded of their public missions and pushed to expand purchases in a tanking market; their portfolio limits were relaxed in September 2007 (and again in February 2009) and capital surcharges were removed in March 2008. The Economic Stimulus Act of 2008 vastly increased conforming loan limits to expand the reach of GSE purchases.

The Housing and Economic Recovery Act of 2008 authorized the Treasury Department to purchase securities issued by Fannie and Freddie and dissolved several regulatory agencies, consolidating authority into the newly created Federal Housing Finance Agency (FHFA). In September 2008, Fannie and Freddie were placed under the conservatorship of the FHFA and were ordered to first increase, then gradually reduce their mortgage portfolios. The Treasury concurrently announced an agency MBS purchase program that resulted in nearly $200 billion worth of purchases through the end of 2009. The Federal Reserve launched QE1 in November 2009, initially committing to purchase $500 billion in agency MBS. The March 2009 expansion of QE1 committed to purchasing an additional $750 billion in agency MBS. Operation twist shifted reinvestment of QE principal repayments from agency MBS and agency debt holdings back into agency MBS, instead of Treasuries. When launched in September 2012, QE3 committed to purchasing $40 billion in agency MBS a month, tapered to $35 billion in December 2013, and terminated in October 2014. For a period during these active interventions in mortgage markets, agency net portfolio purchases and pool issues effectively accounted for all US mortgage originations. As of this writing, the Fed's balance sheet holds roughly $1.75 trillion worth of securitized US residential mortgage debt, nearly one-sixth of that outstanding.[3] Fannie's and Freddie's portfolios are being shrunk while they remain in government conservatorship, but their eventual fate remains unresolved.

As a reference, Table 1 lists the major housing credit policy institutions and their years active.

[3]The Fed's balance sheet included $1.745 trillion worth of FNMA, FHLMC, and GNMA MBS as of January 25, 2017, or 15.3% of the $11.368 trillion in total mortgage debt outstanding for one- to four- family residences and multifamily residences as of 2016Q3, the most recently available quarter (Federal Reserve Statistical Release H.4.1 and Mortgage Debt Outstanding (1.54), accessed 2/1/2017).

Table 1 Principal Institutions of US Housing Credit Policy

HOLC	Home Owners' Loan Corporation	1933-1954
HUD	Department of Housing and Urban Development	1965-
FDIC	Federal Deposit Insurance Corporation	1933-
FHA	Federal Housing Administration	1934-
FHLBS	Federal Home Loan Bank System	1932-
FHFB	Federal Housing Finance Board	1989-2008
FHLMC	Federal Home Loan Mortgage Corporation	1970-
FHFA	Federal Housing Finance Agency	2008-
FNMA	Federal National Mortgage Association	1938-
FSLIC	Federal Savings and Loan Insurance Corporation	1934-1989
GNMA	Government National Mortgage Association	1968 -
OFHEO	Office of Federal Housing Enterprise Oversight	1992-2008
PHA	Public Housing Administration	1937-1965
RFC	Reconstruction Finance Corporation	1932-1957
RTC	Resolution Trust Corporation	1989-1995
VA	Veterans Administration/Department of Veterans Affairs	1944-

3 Overview of Methodology

3.1 Data Sources

Policy changes affecting agencies' purchases and holdings of mortgages can be directed by a range of policymakers, notably the President and the Cabinet, particularly the Secretary of the Treasury and Secretary of the Department of Housing and Urban Development (HUD), regulatory agencies in the executive branch, Congress, and the Federal Reserve Board of Governors. The relevant institutions setting policy have varied considerably over the decades, particularly as regulatory bodies were disbanded and reinvented. Consequently, a wide range of sources were used in documenting the relevant histories of housing finance agencies and identifying significant policy changes. Principal data sources include the legislative text of public laws, the US Code, the Federal Register, the *Budget of the United States Government*, the *Economic Report of the President*, and periodical reports of agencies and regulators, particularly annual reports of the Enterprises, Office of Federal Housing Housing Enterprise Oversight (OFHEO), FHFA, and HUD, among others. The Congressional Research Service (CRS) report "*A Chronology of Housing Legislation and Selected Executive Actions, 1892-2003*" (CRS (2004)) was an extensively used reference for identifying significant policy changes.

Various reports by the Congressional Budget Office (CBO), Government Accountability Office (GAO), CRS, and the Treasury Department often provide particularly detailed analyses of policy changes, estimates of policy impacts, background information, and/or balance sheet data for the agencies in question. Such reports were frequently used in quantifying the impact of policy changes, as was balance sheet data from the annual or periodic reports of the government agencies or their regulators. The ProQuest Congressional Publications Database, legislative text of public laws, Federal Register, HeinOnline's Federal Register Library,

Congressional Quarterly Almanac, and newspapers and newsletters were principally used for documenting the pertinent news, timing, and effective dates of policy changes.[4] For policies affecting Fannie Mae and Freddie Mac in years when they were publicly listed, share prices were also used to pinpoint news of policy changes, as discussed below.

Principal data sources used for identifying motives and context, and classifying policies as cyclical or non-cyclical, include Congressional committee reports and hearings, Presidential speeches and signing statements, the *Budget of the United States Government*, the *Economic Report of the President*, the *Federal Reserve Bulletin* (FRB) and *Annual Report of the Board of Governors of the Federal Reserve*, the *CQ Almanac*, newspapers and financial newswires, and mortgage industry newsletters (particularly *The American Banker* and *National Mortgage News*).[5] Final rules published in the Federal Register almost always include a detailed background and overview of the initial proposed rule, public comments received, and subsequent modification of the rule, if applicable.

For legislative housing policy authorizations, the accompanying reports of the US Senate Committee on Banking, Housing and Urban Affairs and the US House Financial Services Committee (or their preceding committees of jurisdiction) typically detail the committees' motivations and any pertinent economic context. These reports also often include additional views or dissenting opinions by Committee members, as well as CBO or Joint Committee on Taxation (JCT) cost estimates if applicable. Committee report language also occasionally include staff estimates of the effect of a policy change. For appropriation bills setting policy for Ginnie Mae, the reports of the Senate Committee on Appropriations and House Committee on Appropriations typically detail the motivation for changes in funding, authorizations, or loan limits. Conference committee reports on the final version of a bill rarely discuss the overarching motivation of a bill, but sometimes offers insight to the adoption of a provision included in only one chamber's version of the bill, or relevant news regarding the timing of a pending policy change first adopted in conference. Major pieces of housing policy legislation are typically accompanied by a Presidential signing statement explicitly detailing the law's motivation and context. State of the Union addresses and other presidential speeches, the

[4]Issues of the Federal Register since 1994 are digitally available and searchable through the Office of the Federal Register (https://www.federalregister.gov). All issues are available through HeinOnline's Federal Register Library (http://home.heinonline.org, subscription required).

[5]Transcripts of all public laws, Congressional committee reports, and Congressional hearing transcripts were made publicly available upon publication, and are easily accessible online for recent decades. Public laws and related legislative actions since the 93rd Congress (1973–1974) are available from Congress.gov, a project of the Library of Congress. Committee reports since 1995 are also available via Congress.gov. Older public laws are generally available through LegisWorks Statutes at Large Project (http://legisworks.org/sal/), created and maintained by Joe Carmel. Most Congressional hearing transcripts are digitally available since the 99th Congress (1985–1986) from the US Government Publishing Office (https://www.gpo.gov/fdsys/browse/collection.action?collectionCode=CHRG). And the ProQuest Congressional Publications Database's Legislative & Executive Publications provides a far more comprehensive compilation of all of the above (http://congressional.proquest.com/congressional, subscription required). Presidential speeches and signing statements are publicly available online from The American Presidency Project (www.presidency.ucsb.edu), a collaboration of John T. Woolley and Gerhard Peters.

Budget of the United States Government, and the *Economic Report of the President* often shed insight on the motivation behind newly proposed housing policies or their estimated impact.

3.2 Identifying Significant Policy Changes

Policy changes related to government agencies' mortgage holdings are identified as "significant" if they would be expected to directly or indirectly impact agencies' legal or otherwise binding authorization regarding the permissible or mandated volume of commitments to purchase mortgages, net mortgage purchases, and retained mortgage portfolio holdings, or if they considerably expanded the pool of eligible mortgages that an agency was legally allowed or required to purchase. Examples of policies with a direct effect include outright portfolio caps, new purchase programs, and new mortgage program authorizations, whereas examples of policies with indirect effects include changes in leverage ratios, capital requirements, or conforming loan limits. Examples of policies influencing aggregate volumes of purchases include leverage ratios and direct appropriations or provision of working capital, whereas policies considerably expanding the pool of eligible mortgages include conforming loan limits, affordable housing goals, or authorization to expand into new mortgage markets, such as adjustable-rate mortgages (ARMs) and second mortgages.

Significant policy changes affecting the government's purchases and holdings of mortgage securities generally originate from one of three sources: enacted legislative changes, regulatory policy changes published in the Federal Register or otherwise binding agreements entered between regulators and regulatees, and macroeconomic or systemic financial stabilization policies managed by the Federal Reserve or Treasury Department. Significant policy changes set legislatively include statutory leverage ratios, capital requirements, mandatory retirements of public stock, conforming loan limits, provision of public funds for working capital, and direct appropriations or borrowing authority earmarked for purchases, among others. Significant regulatory policy changes include regulators setting permissible debt-to-capital ratios, requiring capital surcharges in excess of statutory capital requirements, capping portfolios size or growth, setting affordable housing goals, and authorizing new mortgage market programs. Monetary policy and systemic financial stabilization include taking Fannie Mae and Freddie Mac into conservatorship in September 2008 and purchasing agency mortgage-backed securities (MBS), as in various large scale asset purchase programs conducted by the Federal Reserve and Treasury Department since 2008.

As a secondary litmus test, "significant" policy changes must be sufficiently material that primary sources either explicitly projected their likely impact or could be used to quantify likely impacts, and must be quantified with a non-zero impact. Often a policy change would require no ex ante expansion or contraction in an agencies' purchase or holding behavior, because its statutes would not represent a binding constraint given the agency's balance sheet or portfolio composition. For instance, the statutory capital requirements imposed on both Fannie and Freddie in 1992 had no expected impact on the balance sheet behavior of Freddie Mac, which had a much stronger capital position than Fannie and wasn't the target of regulators' concerns; indeed

no effort to increase capitalization could be discerned for Freddie ex post, while the opposite was true for Fannie. Similarly, in formulating the GSEs' affordable housing goals for 1996–1999, HUD chose intentionally modest goals that they had concluded "*would not materially affect the enterprises' financial condition*." Such policy changes are typically documented for overarching regulatory context but categorically considered not significant policies affecting mortgage holdings.

We restrict significant policy changes to those altering government agencies' ability to purchase or hold mortgages, ignoring any laws that merely extend existing authorizations. For example, Fannie Mae was temporarily authorized to purchase second mortgages and create a secondary market for second mortgages in September 1981, set to expire in March 1983. In practice, this authorization was renewed several times before being made permanent in 1987. We only count the first temporary authorization as a significant policy change. For certain annual authorizations affecting Ginnie Mae, we attempt to use a current policy baseline as opposed to a current law baseline if applicable, for instance scoring changes in fiscal year loan limits relative to the limit authorized for the previous year, rather than the lack of any new legislation. There is no distinction between a current law and current policy baseline for funding increases relative to permanent authorizations or appropriations.

Authorization extensions or other policies that may have had an incidental impact on purchases are, however, often documented to shed light on the motivation of related significant policy changes and present a more comprehensive narrative of the pertinent evolution of US federal housing credit policy. For instance, the Miscellaneous Revenue Act of 1982 amended Fannie's net operating loss carryback and carryforward tax treatment to improve its balance sheet. JCT estimated that the tax changes would reduce Fannie's tax liability by $14 million in FY1983 and increase tax liability an equivalent amount in FY1984. This time-shift in tax liability would have only had an incidental impact on Fannie's potential purchases or asset holdings, but it is indicative of Congressional intent to paper over Fannie's losses and help them "grow to health," in part to avoid more direct public support. Two months later, Fannie's debt-to-capital ratio was increased for similar reasons—a policy change significantly affecting permissible asset holdings.

All significant policy changes documented in the narrative analysis begin with a table summarizing the regulatory policy changes, the affected agency, the policy's projected annualized impact on that agency's retained purchases (in nominal billions), our determination of its news being made public, the timing of the policy becoming effective, and our classification as principally motivated by either cyclical or non-cyclical concerns.

3.3 Quantification and Timing

All significant policy changes are quantified and reported as annualized impacts in billions of nominal dollars, dated to our judgement about the pertinent month in which the policy change become public infor-

mation. For relatively large, open-ended changes unlikely to be fully realized on impact, such as leverage ratio increases or permanent appropriations, potential impacts on mortgage holdings are annualized using a *two-year rule*, which assumes half of the full potential impact would be realized within the first year. The two-year rule is in part meant to accommodate the possibility that a balance sheet regulatory change would not necessarily become a tightly binding constraint, particularly not in its first year of effect. In the case of policies authorizing commitments to purchase mortgages, the two-year rule is also meant to allow for some attrition of unexcercised commitments not resulting in purchases or longer lags between commitments made and translating to purchases when exercised.[6]

If a baseline is needed for quantifying a policy change, say for regulatory capital of purchase volumes, we always use the most recent available data *before* the policy change was made. We use ex ante balance sheet data on regulatory capital, liabilities, and/or assets in conjunction with standing capital or leverage requirements to estimate the impact of related changes. For example, the HUD Secretary increased Fannie's permissible debt-to-capital ratio from 25-to-1 to 30-to-1 in December 1982. Using 1981 year end regulatory capital of $2.5 billion (Department of the Treasury (1990), p. A-82), the implied maximum growth in mortgage assets is $12.5 billion ($2.5 billion $\times$ (30 - 25) = $12.5 billion). Using the two-year rule, we assign a $6.25 billion annualized increase in December 1982.

To quantify potential impacts of discretionary conforming loan limit changes, we rely on estimates from accompanying congressional committee reports and home price indices. For example, the Housing and Community Development Act of 1974 raised the conforming loan limit for conventional mortgages eligible for purchase by Fannie and Freddie from $33,000 to $55,000. The House committee report stated that raising FNMA's loan limit to $55,0000 "*would permit FNMA to serve much the same housing market in terms of constant dollars as it was authorized to serve when the Emergency Home Finance Act was enacted [in July 1970]*" (House Committee on Banking and Currency (1974), p. 29). Pursuant to the House and Senate committee report language, we assume that the change would restore FNMA's real purchasing power relative to purchase volumes surrounding the last December 1969 Section 203(b) loan limit increase and the July 1970 enactment of the Emergency Home Finance Act. The $5.93 billion average net purchase volume over 1969Q4 through 1970Q3 would have translated to $7.91 billion at the end of June 1974, adjusted for the 33.3% increase in OFHEO's seasonally adjusted Constant-Quality House Price Index for new homes sold over 1970Q3 and 1974Q2. We use four-quarter rolling averages to smooth out any residual seasonality

[6]Broadly speaking, the Enterprises sell commitments to purchase conforming mortgages from primary market lenders at a predetermined price, which may then be exercised by the mortgagee up to an expiration date. But there are a range of commitment contract structures, and these have varied over time. Fannie Mae currently defines a mandatory delivery commitment is "*a whole loan commitment that generally requires the lender to deliver eligible mortgages equal to at least the minimum required delivery amount (which is an amount that will not be less than the original commitment amount by more than $10,000 or 2.5% of the original amount) by the expiration date of the commitment.*" A long-term standby commitment is "*negotiated structure that enables a lender to reduce its credit exposure by paying a monthly commitment fee on an identified portfolio of mortgages in exchange for the lender's agreement to deliver on a mandatory basis, and Fannie Mae's agreement to purchase any mortgage at par should it become a specified number of months delinquent after the date of the commitment*" (FNMA (2016)).

and other idiosyncratic sources of volatility. Relative to the $6.77 billion net purchase volume over 1973Q3 and 1974Q2, the year before enactment of the Housing and Community Development Act of 1974, this represents an increase of $1.14 billion, which we assign to the year starting August 1974.

For other difficult-to-quantify policies, particularly authorizations for program expansions into new markets (e.g., ARMs or second mortgages), we tend to look for ex ante estimates of the impact on mortgage purchase activity quoted by committee report language, market analysts, regulators, or agency executives.

Our judgement about the pertinent timing of each policy typically revolves around identifying when a policy change became publicly anticipated, as opposed to when a policy change was formally announced or took effect. Regulations often use the date of a proposed rule first being published in Federal Register, if materially similar to the final rule, as opposed to the date of the final rule's publication or effect. News of legislative changes is typically dated to enactment, but sometimes when the relevant provision was first agreed upon in conference committee, though enactment usually follows within a week or so of conference.[7] If applicable, policies are dated when leaked to the press ahead of formal announcement, or when agencies are found to be demonstrably getting ahead of the curve of pending policy changes they anticipate as inevitable. For Fannie Mae and Freddie Mac, excess stock returns, defined as the daily GSE share price changes over that of S&P 500, were also cross-referenced with financial news to ensure a news component was being priced into policy changes, and to verify the timing of policy changes. While our primary emphasis and most relevant determination is when the news of a policy was made public, we also provide a determination of when each significant policy took effect and when it was officially announced or the related bill was enacted.

3.4 Classification by Motivation

The principal purpose of the classification by motivation is to single out those policies that are convincingly unrelated to the contemporaneous business and/or financial cycle conditions. In doing so, we parse pertinent historical documents, paying particular attention to descriptive language in committee reports and policymakers' speeches, well-documented preferences of the current administration, characterizations by the press, as well as the nature of legislative vehicles or regulatory processes, timing and evolution of policy changes, policy horizon, and broader political context surrounding a policy change.

Motivations for policy changes leading to expansions or contractions in consolidated agency mortgage holdings almost exclusively fall into one or more of four broad categories: Business or financial cycle motives, social policy objectives, structural budgetary motives, or other (often ideological) political preferences.

[7] Disagreements between provisions in House and Senate versions of a bill, wholesale amendments in the conference process, and uncertainty about bills stalling out entirely makes it harder to characterize expectations about pending legislative process policy changes than regulatory changes.

Policymakers are typically quite explicit about cyclical objectives, especially during recessions or credit crunches. Policies classified as principally cyclically motivated tend to emphasize short-term outcomes, such as intending to boost housing starts in a recession. Correspondingly, legislative vehicles for such policy changes tend to be drafted and enacted quickly, with a relatively concise legislative history. Examples of policymakers' language suggestive of cyclical motivations include "*emergency, crisis, recession, credit shortage, credit crunch, housing starts, employment, construction, downturn, depressed, stimulus, boost,*" and the like. When inferring motives from policymakers' quotes or other textual primary sources, particularly informative language, such as the above examples, is often emphasized in boldface. Policies enacted during or near a recession or credit crunch face a higher bar for being classified as unrelated to the business cycle, but are by no means categorically classified as cyclically motivated, such as the accounting scandals that surfaced at first Freddie Mac and then Fannie Mae in the early 2000s.

Conversely, policies seemingly principally motivated by budgetary, social policy, or other political objectives are classified as unrelated to the business or financial cycle *provided* the language associated with their implementation is not also suggestive of short-term economic or financial concerns. Political context often shapes the timing of non-cyclical policy changes, such as concern with the structural budget deficit, an administration's emphasis on expanding affordable homeownership opportunities to low- and moderate-income households, or ideological hostility toward the GSEs. Legislative policies classified as principally unrelated to the business or financial cycle typically emphasize longer-term outcomes, such as promoting homeownership or sustaining increased funding for purchases over a number of years. Legislative vehicles for such policy changes tend to be slower-moving bills, particularly deliberate overhauls of housing policy with a lengthy legislative history. The National Housing Act, Housing and Urban Development Act, and Housing and Community Development Acts of various years tend to meet this description, being slowly crafted and negotiated between the Senate Committee on Banking, Housing and Urban Affairs and the House Financial Services Committee and focusing on broad, long-term objectives for US housing policy. Examples of policymakers' language suggestive of cyclical motivations include "*long-term, farsighted, comprehensive, low-income, affordable housing, American Dream*," and the like. Regulatory policy changes classified as not-cyclically motivated tend to be actions shaped by prior law or precedent or spurred by events that are specific to the agencies.

Classifications are usually straightforward, but occasional judgement calls are inevitable. Moreover, no uniform algorithm for classification is appropriate for the idiosyncrasies of half a century worth of policy changes affecting five agencies and numerous policymakers. To provide a better sense of our application of the guidelines sketched out above, we provide concise examples classifying one of each four broad categories of policy motivations below.

Example 1: Business or Financial Cycle Motives. Policies motivated by economic or financial cycle concerns include those aimed at boosting housing starts or construction employment, and smoothing

mortgage credit or lowering borrowing costs for would be homeowners. A clear example of a policy change motivated by both cyclical economic and financial concerns was congressional authorization of up to $7.5 billion of "*emergency special assistance authority*" for Ginnie Mae to make subsidized purchases of conventional mortgages in the Emergency Home Purchase Assistance Act of 1974 (Pub. L. 93-449), which was quickly drafted and enacted in October 1974, during the recession lasting from November 1973 through March 1975.

Example 2: Structural Budget Deficit Motives. Policies motivated by federal budget concerns are those intended to reduce public debt or those made for improved budgetary optics, such as moving programs "off-budget" to decrease the unified budget deficit. For instance, the splitting off a newly quasi-privatized Fannie Mae from a publicly retained Ginnie Mae as part of the Housing and urban Development Act of 1968 was largely motivated by the Johnson administration's desire to reduce government debt; the conversion of secondary market operations to private ownership in 1969 was estimated to reduce US public debt by $6 billion, concurrent with the escalation of the Vietnam War and associated increases in defense spending and public borrowing. While Congress had originally intended Fannie Mae to be chartered as a private entity, and intended to eventually privatize Fannie Mae when it was rechartered in 1954, the timing of Fannie's eventual privatization was largely driven by these budgetary concerns influencing the deliberative process of drafting the Housing and Urban Development Act of 1968 (Pub. L. 90-448).

Example 3: Social Policy Objectives. Policy changes intended to meet social policy objectives include those deliberately aimed at increasing homeownership rates, or targeting homeownership assistance to particular demographics, such as veterans or low- and moderate-income households. For instance, when HUD's affordable housing goals for Fannie and Freddie came up for renewal in 2004 for the first time under the George W. Bush Administration, aggressive new goals were set to rise every year between 2005 and 2008. This policy change fell under a broader policy umbrella of the administration prioritizing expanding affordable home ownership, particularly for minorities. The President had emphasized using the GSEs to promote minority homeownership in a June 2002 speech: "*Too many American families, too many minorities do not own a home. There is a home ownership gap in America. The difference between Anglo America and African American and Hispanic home ownership is too big... Fannie May and Freddie Mac, as well as the federal home loan banks, will increase their commitment to minority markets by more than $440 billion... This means they will purchase more loans made by banks after Americans, Hispanics and other minorities, which will encourage homeownership. Freddie Mac will launch 25 initiatives to eliminate homeownership barriers*" (Bush (2002)). In signing into law the tellingly titled American Dream Downpayment Act of 2003, President Bush emphasized that "*This administration will constantly strive to promote an ownership society in America. We want more people owning their own home. It is in our national interest that more people own their own home. After all, if you own your own home, you have a vital stake in the future of our country*" (Bush (2003)).

On November 1, 2004, HUD announced that the low- and moderate-income goal was being raised from 50% to 52% in 2005 and rising to 56% by 2008; the underserved areas goal and special assistance goals saw similarly large increases (69 FR 63581).[8] HUD projected that to meet the new housing goals, Fannie and Freddie together would have to purchase an additional 400,000 goal-qualifying home loans during the four-year period 2005-2008, above what they would purchase without the increase in the housing goals, or about $61 billion of additional mortgage debt based on the average balance of goal qualifying mortgages purchased in 2003 (HUD (2004)). The increased goals were clearly motivated by the social policy objective of increasing homeownership and minority homeownership, and had no other discernible stabilization or budgetary motive (they were regulatory in nature, and hence had no direct impact on the federal budget).

Example 4: Political Preferences. Policies that are predominantly politically motivated for reasons unrelated to social policy include efforts to shrink and eventually privatize the GSEs (often prioritized by Republican administrations) as well as scapegoating, saving face, or capitalizing on political backlashes to public scandals. For instance, in the political backlash to Fannie Mae's accounting scandals in the early 2000s, regulators forced Fannie to achieve a 30% capital surplus above its statuary minimum requirements after ruling that Fannie had misapplied accounting rules; the George W. Bush administration, which wanted the GSEs downsized and eventually privatized, was perceived as exploiting the scandal to rein in Fannie, and later Freddie as well.

We find very little overlap between clearly cyclically motivated policies and the other three broad categories of policy changes. There tends, however, to be considerably more overlap between legislated policies primarily motivated by structural budget deficit, social policy, or other political objectives, which should not be surprising given the nature of their legislative vehicles. These latter types of policy changes tend to be enacted in deliberate and comprehensive bills, and a policy change may have a primary motive while its legislative vehicle promotes an array of other non-cyclical objectives. These bills are also frequently characterized by a greater deal of compromise and back-and-fourth between the House and Senate or between Congress and the White House, presenting more opportunity for multiple objectives.

For instance, the quasi-privatization of Fannie by the Housing and Urban Development Act of 1968, briefly described above, was primarily motivated by structural budget concerns of the Johnson Administration related to the escalation of the Vietnam War. But while the particular timing of this quasi-privatization was driven by budgetary concerns, the action also fulfilled a long-standing political objective dating back to Fannie's 1954 Charter Act. And the Act's stated overarching purpose was "*To assist in the provision of housing for low and moderate income families, and to extend and amend laws relating to housing and urban development*," interpreted as advancing social policies and redistributional concerns. Similarly, it was suggested

[8] In 1999, the Clinton administration had already markedly increased goals from 42% in 1999 to 48% in 2000 and 50% for 2001–2004.

that the Bush Administration pushed HUD to increase the Enterprises housing goals in 2004 in part "*to make sure Fannie and Freddie understood who was the boss in the relationship*" as part of a broader effort to rein in the GSEs being coordinated with the Federal Reserve (McLean (2015), p. 88)

Moreover, the distinction between structural budget deficit motives, social policy objectives, and other political objectives is not particularly germane to the underlying objective of developing instruments to study the effect of expansions or contractions in government holdings of mortgage assets on the housing and mortgage market, as well as macroeconomic aggregates and other financial variables. As such, we aggregate our policy classifications into a binary choice between cyclically motivated and non-cyclically motivated.

4 Narrative Analysis

The section contains the discussion of individual housing credit policy changes, which are presented chronologically for each of the following agencies: the Federal National Mortgage Association (FNMA), the Federal Home Loan Mortgage Corporation (FHMLC), the Government National Mortgage Association (GNMA), the Federal Reserve, and the US Treasury Department. We focus on the policy changes since the Housing and Urban Development Act of 1968. The history of FNMA, however, is traced back to its Great Depression origins to provide broader context regarding its charter, public mission, and the evolution and systematic nature of US federal housing credit policy. Following Freddie Mac's privatization in 1989, numerous policy changes applied to both Fannie and Freddie. In these cases, the pertinent context and details regarding quantification, timing, and classification are covered thoroughly in the policy's listing under Fannie Mae, with minimal repetitiveness in its listing under Freddie Mac.

4.1 Federal National Mortgage Association

The Federal National Mortgage Association, established by Congress in 1938, was authorized to buy FHA-insured mortgages with the objective of supporting a secondary market. To that end, Congress had intended the National Housing Act of 1934 to induce the incorporation of legally privileged private national mortgage associations, which were first authorized by that bill. However, lack of private sector interest led to the National Housing Act amendments of 1938, which ordered the creation of a Federal National Mortgage Association as a wholly owned subsidiary of the RFC. FNMA was transferred to the Federal Loan Agency in 1939, to the Department of Commerce in 1942, and back to the Federal Loan Agency in 1945. The Housing Act of 1948 granted an explicit statutory basis for the FNMA, which was also newly authorized to deal in VA-guaranteed mortgages. In 1950, Fannie Mae became part of the Housing and Home Finance Agency.

The FNMA Charter Act of 1954 rechartered a nearly bankrupted Fannie Mae into a three part corporation, separating a special assistance function, management and liquidations function, and secondary mortgage market operations. The special assistance function amounted to a direct government lending program for certain FHA loans that were not generally acceptable to investors, primarily because of their low interest

rates. The management and liquidations section was set up to liquidate Fannie Mae's previously amassed mortgage portfolio in an orderly fashion, although it also continued mortgage purchases for many months because of outstanding precommitments to purchase mortgages. The secondary market operations were to continue supporting the market for FHA/VA guaranteed mortgages. The 1954 Act turned Fannie Mae into a mixed-ownership corporation by requiring authorized mortgagees to purchase stock; the Act also envisaged an eventual full privatization of Fannie Mae. The 1954 Act also allowed Fannie to issue debt in capital markets, subject to leverage constraints.

The Housing and Urban Development Act of 1968 split off the secondary market operations into a privatized Fannie Mae, while transferring the special assistance and management and liquidations functions into a newly created and government-retained Government National Mortgage Association (Sec. 4.3). The 1968 Act gave HUD considerable regulatory authority over Fannie Mae, including the authority to require that it devote a reasonable portion of mortgage purchases to low- and moderate-income housing. The 1968 Act preserved Fannie's ability to borrow from the Treasury, which reduced the perceived riskiness of its debt. Following the 1969 credit crunch, the Emergency Home Finance Act 1970 allowed Fannie Mae to expand its activities to the conventional mortgage market, subject to loan limits comparable to those applying to FHA mortgages and conditional on the approval of the HUD Secretary. That Act also established the Federal Home Loan Mortgage Company (Sec. 4.2), intended as Fannie's counterpart in the secondary mortgage market, albeit focused on supporting liquidity and credit for the FHLBank System and S&Ls.

In the aftermath of the savings and loans crisis, the Financial Institutions Reform, Recovery, and Enforcement Act of 1989 expanded the objectives of FNMA's secondary mortgage market to promote homeownership for low- and moderate-income borrowers. The Federal Housing Enterprises Financial Safety and Soundness Act of 1992 (FHEFSSA) created OFHEO, a new regulatory agency within HUD charged with the safety and soundness supervision of Fannie and Freddie. FHEFSSA also established statutory minimal capital requirements, instructed OFHEO to develop additional risk-based capital requirements, and mandated that HUD set and enforce affordable housing goals. Accounting scandals in the early 2000s prompted greater oversight, capital surcharges, and portfolio caps. The Housing and Economic Recovery Act of 2008 abolished the OFHEO along with the Federal Housing Finance Board (FHFB), the regulator of the FHLBanks at the time, consolidating regulatory authority in the newly formed FHFA replacing them. The Act also gave the Treasury authority to purchase securities issued by Fannie or Freddie. In September 2008, Fannie was placed under the conservatorship of the Federal Housing Finance Agency, and Fannie was ordered to first increase then gradually reduce its portfolio of mortgage assets.

In this section, we discuss the policy events affecting Fannie Mae starting with the Housing and Urban Development Act of 1968. In the accompanying online appendix, we discuss important policy events before 1968, starting with the National Housing Act of 1934.

Housing and Urban Development Act of 1968 (Pub. L. 90-448) Enacted: August 1, 1968

Policy Change	Agency	Impact	News	Effective	Classification
Increased Debt-to-Capital Ratio	FNMA	+$1.39 billion	Oct. 1968	Oct. 1968	Non-Cyclical

The Act split Fannie Mae into the Government National Mortgage Association and a quasi-private Fannie Mae, and ushered in a new era of mortgage securitization by government-sponsored secondary mortgage markets. Retained as a government corporation fully under HUD administration, Ginnie Mae assumed the management and liquidations and special assistance functions. Fannie Mae, a government-sponsored private corporation, retained the secondary market operations and was given permission to issue mortgage-backed securities, which could be structured as other debt obligations or trust certificates. The purpose of the new MBS authorization was "*To provide a greater degree of liquidity to the mortgage investment market and an additional means of financing its operations*." The Act also authorized Ginnie Mae to guarantee timely payments of MBS issued by Fannie or other authorized issuers (see GNMA, Sec. 4.3). The first mortgage-backed bond was issued in 1970.

The Act required the retirement of all the Treasury's preferred FNMA stock and authorized issues of subordinated debt, to be included in regulatory capital, up to twice the sum of equity capital, surplus, and retained earnings. Private stockholders received two-thirds representation on Fannie's board of directors, with the remaining third to be appointed by the President, who could also remove any member of the board for good cause. The Association was allowed to operate nationwide in the secondary market while being exempt from Securities and Exchange Commission (SEC) disclosures and securities fees, as well as exempt from state and local income taxes. Most significantly, the newly charted Fannie also retained standby borrowing authority with the Treasury of up to $2.25 billion, and FNMA securities joined Treasury securities in privileged exemption from depository institutions' portfolio limitations (Hagerty (2012), p. 40).

In exchange for these privileges, the HUD Secretary received general regulatory powers over Fannie to ensure that the purposes of the newly amended FNMA Charter Act continued to be served. These powers included the ability to restrict dividends paid to stockholders and to increase the debt-to-capital ratio beyond the statutory limit of 15 times its capital and retained surplus, and the HUD Secretary's prior approval would be required for any changes in minimum stock retention requirements as well as issuances of securities and debt obligations. The Act also gave the HUD Secretary the authority to require that a reasonable portion of Fannie's mortgage purchases advanced the national policy objective of providing adequate housing for low- and moderate-income families, provided these provide purchases provided "*a reasonable economic return*" to FNMA's stockholders. Through these various regulatory powers, Congress intended that "*the Secretary would participate in the decision making process as to the level of mortgage purchases at various time*" (Senate Committee on Banking and Currency (1968), p. 82). At the same time, the Act explicitly limited HUD's involvement in Fannie's activities; regulatory powers were not to extend to Fannie's internal affairs, such as staffing, salaries, and other usual corporate matters, unless to protect the financial interests of the Federal Government.

On September 30, 1968, a total of $250 million in subordinated debentures were sold to the public to retire the Treasury stock and share of retained earnings. This issuance exceeded the amount required for retirement by $33 million, which was added to FNMA's capital stock (Bartke (1971), p 43). Fannie had obtained a letter from the Treasury Secretary guaranteeing that, if necessary, the Treasury would make loans to Fannie to ensure the timely payments of principal and interest on its debt (Senate Committee on Banking, Housing and Urban Affairs (1976a)). The subordinated debentures were included in regulatory capital in the debt-to-capital restriction. On October 1, 1968, one day after the Treasury stock was retired and Fannie became a private corporation, the HUD Secretary increased

Fannie's cap on secondary market facility borrowing leverage from 15 to 20 times Fannie's regulatory capital (33 FR 14779). Using 1968 year end capital of $450 million (FNMA Annual Report 1969) and taking into account the $33 million addition yields an estimated potential portfolio expansion of up to $2.778 billion ($450 million $\times$ (20+1) - ($450 million -$33 million) $\times$ (15+1) = $2.778 billion). Using the two-year rule, we assign one half of that amount as an annualized increase in Fannie's portfolio capacity of $1.389 billion starting October 1968.

According to the HUD Secretary, the transfer of FNMA's secondary market operations to entirely private ownership fulfilled the intent of Congress when it rechartered FNMA in 1954 (Senate Committee on Banking and Currency (1968)). The Act amended Fannie's statutory purpose under Section 301 of the FNMA Charter Act to read as follows (revisions underlined):

> "*SEC. 301. The Congress hereby declares that the purposes of this title are to establish secondary market facilities for home mortgages, to provide that the operations thereof shall be financed by private capital to the maximum extent feasible, and to authorize such facilities to*
>
> "*(a) provide supplementary assistance to the secondary market for home mortgages by providing a degree of liquidity for mortgage investments, thereby improving the distribution of investment capital available for home mortgage financing;*
>
> *"(b) provide special assistance (when, and to the extent that, the President has determined that it is in the public interest) for the financing of (1) selected types of home mortgages (pending the establishment of their marketability) originated under special housing programs designed to provide housing of acceptable standards at full economic costs for segments of the national population which are unable to obtain adequate housing under established home financing programs, and (2) home mortgages generally as a means of retarding or stopping a decline in mortgage lending and home building activities which threatens materially the stability of a high level national economy; and*
>
> *"(c) manage and liquidate federally owned mortgage portfolios in an orderly manner, with a minimum of adverse effect upon the home mortgage market and minimum loss to the Federal Government.*

Of note, the revisions to Fannie's statutory purpose underscore Congressional intent to sponsor multiple secondary markets and to manage and liquidate multiple federally owned mortgages portfolios, as opposed the narrower scope of "*the existing mortgage portfolio of the Federal National Mortgage Association*" as advanced by the FNMA Charter Act of 1954.

The privatization of Fannie's secondary market operations is widely viewed as being largely motivated by the administration's desire to reduce government debt (FCIC (2011), p.38). A budgetary reform commission established in 1967 had recommended moving Fannie's secondary market operations onto the Federal Budget as a matter of sound budgeting, but doing so would have increased the deficit by $2.5 billion at the time, which was viewed as "*untenable*." Historical background materials accompanying hearings before the Senate Committee on Banking, Housing, and Urban Affairs explained that "*spinning off Fannie's Secondary Market Operations into a separate corporation was proposed as a means of accomplishing the transition to private ownership, **keeping Fannie Mae from showing up on the Federal Budget**, and retiring the outstanding preferred shares owned by the U.S. Treasury*" (Senate Committee on Banking, Housing and Urban Affairs (1976a), pp. 104-105). The conversion to complete private ownership during 1969 reduced Federal debt by about $6 billion (1970 Budget, Special Analyses, p. 27). The escalation of the Vietnam War, in conjunction with the Great Society expansions of social insurance, were adding to concerns about the budgetary outlook.

The accompanying committee report also underscored that the Act was the result of a multi-year deliberative process seeking to address longer-term homeownership goals unrelated to stabilization. The report framed the bill as intended to meet the President's proposed "*program of Federal assistance for the construction and rehabilitation of 6 million housing units* ***over a 10-year period*** *for the* ***low and moderate income families*** *of this country,*" as outlined in his February 28 message to Congress on housing and cities. With the Act, Congress established an even more aggressive new national goal of creating 26 million new dwelling units over the next decade (Senate Committee on Banking, Housing and Urban Affairs (1976a), p. 66). In his remarks upon signing the Act, President Johnson hailed the bill as "*the most* ***farsighted****, the most* ***comprehensive****, the most massive housing program in all American history*," framing the bill as the capstone to more than three decades of housing policy that began with "*President Franklin D. Roosevelt's conviction that a compassionate and farsighted government cannot ignore the plight of the ill-housed or the ill-fed or the ill-clothed*" (Johnson (1968)). His remarks made no mention of countercyclical motivation or other short-term policy objectives.

The Federal Reserve Bulletin's October 1968 overview of construction and mortgage markets highlighted record construction volumes and strong levels of housing starts, with demand buoyed by a two-year backlog of under-building. The Fed further noted that disintermediation fears had eased considerably since June (FRB October 1968, p. 787). The Fed characterized the Act as "*extremely comprehensive*" but noted that implementation of much of the Act "*will be delayed because of funding requirements and time needed to develop and adjust to new regulations. Consequently, although the long-run implications are very substantial, only a limited net stimulus to residential and other construction in particular to real estate markets in general may be realized from this legislation during the current fiscal year*" (FRB October 1968, p. 789).

We classify the Act's retained portfolio impact as unrelated to the business or financial cycle, as the privatization of Fannie was motivated by long-standing Congressional intent and budgetary concerns unrelated to the business cycle, underscored by the fact that the broader Act was the result of a deliberative legislative process, oriented toward long-term housing objectives, and crafted and enacted during neither a recession nor a credit crunch.

HUD Increase of Debt-to-Capital Ratio (34 FR 19656) Announced: December 4, 1969

Policy Change	Agency	Impact	News	Effective	Classification
Increased Debt-to-Capital Ratio	FNMA	+$1.19 billion	Dec. 1969	Dec. 1969	Cyclical
Treasury-Guaranteed Capitalization	FNMA	+$2.6 billion	Apr. 1970	Apr. 1970	Cyclical

On December 4, 1969, HUD Secretary George Romney, appointed by the new Nixon administration, again increased Fannie's cap on secondary market facility borrowing leverage from 20 to 25 times its regulatory capital, effective December 8, 1969 (34 FR 19656). Using 1969 year end capital of $476 million (FNMA Annual Report 1969) yields an estimated expansion of up to $2.380 billion ($476 million × (26 - 21) = $2.38 billion). Using the two-year rule, we assign an annualized increase in FNMA's purchase capacity of $1.19 billion starting in December 1969.

The move took place as the Nixon administration sought to "get control" of Fannie during its transition to private ownership by sacking and eventually ousting Fannie President Lapin—a Democrat and Johnson administration appointee supposedly uncooperative with Romney and the Republican White House. Lapin publicly fought and legally challenged his removal without cause, but eventually conceded (Hagerty (2012)), pp. 43-45). This partisan power

struggle during Fannie's transition suggested that FNMA was not as independent as the 1968 Act had intended, and presaged that FNMA would remain a political football in the coming decades.

On April 1, 1970, Fannie sold another $200 million in subordinated debentures with an accompanying Treasury letter—again guaranteeing timely repayment with a Treasury backstop—allowing a further portfolio expansion of up to $5.2 billion ($200 million $\times$ (25+1) = $5.2 billion). Because the Treasury's guarantee letter was a deliberate policy action and unrelated to the HUD Act of 1968, we view this as a distinct and significant policy change. Using the two-year rule, we assign an annualized increase in FNMA's purchase capacity of $2.6 billion starting in April 1970. As a result of "*the increasing market acceptance for FNMA's subordinated debt,*" no Treasury letter was requested for subsequent issues, and no explicit government guarantee was volunteered (Senate Committee on Banking, Housing and Urban Affairs (1976a), p. 232).

The transitional period towards private ownership officially ended on May 21, 1970, when the HUD Secretary signed the proclamation converting Fannie from a government agency to a private corporation. On August 31, 1970, Fannie Mae stock was traded for the first time on the New York Stock Exchange (NYSE).

The economic environment had shifted markedly between the HUD Secretaries' first and second increase of Fannie's debt-to-capital ratio. Hearing transcripts from the Senate Committee on Banking, Housing and Urban Development explicitly cited that the leverage increase was the consequence of Fannie's portfolio growth "***during a period of tight money***" (Senate Committee on Banking, Housing and Urban Affairs (1976a), p. 110). The Federal Reserve Bulletin's July 1969 overview of mortgage, construction, and real estate markets cited that residential construction activity had been declining since January, also noting "*a growing dissatisfaction among financial investors with mortgages—as with all types of fixed-income investments*" in the prevailing inflationary environment. (FRB July 1969, p. 565). HUD's debt-to-capital ratio increase during Fannie's transition period was granted during what would later be classified as the credit crunch persisting from 1969Q1 through 1970Q1. In December 1969, the economy entered a recession lasting through November 1970. The Federal Reserve Bulletin's March 1971 overview of mortgage, construction, and real estate markets noted that housing starts bottomed out in early 1970, after monetary policy had transitioned to accommodation, and housing construction bottomed out in July (FRB March 1971, p. 167). Consequently, we classify both these transition-support policy changes as cyclically motivated.

Housing and Urban Development Act of 1969 (Pub. L. 91-152) Enacted: December 24, 1969

The Act extended various authorizations from the Housing and Urban Development Act of 1968 by one- to two-years. Most pressingly, authorization of the FHA's mortgage insurance program had been set to expire on October 1, 1969, and a temporary extension had to be authorized while work on the Act was completed (Pub. L. 91-78, enacted September 30, 1969). The Act increased FHA mortgage insurance loan limits by 10%, raising the limit on Section 203(b) mortgages—and hence FNMA's loan limit for secondary market purchases—-from $30,000 to $33,000. The Senate version of the bill would have increased the FHA loan limits by $2,500 while also indexing loan limits to the annual change in the average sales price of new homes, but the conference committee adopted the House's approach of a one-off percentage increase. In conjunction with the bill's enactment, the Federal Housing Commissioner issued a rule on December 24, 1969 increasing the FHA loan limit, along with numerous other adjustments to FHA programs (35 FR 284).

Insufficient references and documented estimates could be found in the historical record to reliably quantify the estimated impact of this loan limit increase, so this policy change is not considered significant. If it could be quantified,

however, it would have been classified as cyclically motivated. Cyclical concerns had been flagged as Congress began working on the bill in July 1969, and the final bill was enacted in the midst of the 1969 credit crunch. When pressed by members of the House Committee on Banking and Currency Subcommittee on Housing about falling housing starts, Secretary Romney had warned in July 1969 testimony that "*We are experiencing a credit crunch that certainly in terms of interest rates and tightness of money exceeds that of 1966*" (House Committee on Banking and Currency Subcommittee on Housing (1969), p. 7). The Annual Report of the Federal Reserve for 1969 noted that liquidity pressures had markedly intensified for thrifts in the latter half of the year, and that FNMA and the FHLBB were trying to "*channel a large volume of funds into housing finance*" (Annual Report of the Federal Reserve for 1969, p. 6).

Emergency Home Finance Act of 1970 (Pub. L. 91-351) Enacted: July 24, 1970

Policy Change	Agency	Impact	News	Effective	Classification
Conforming Mortgage Program Approval	FNMA	+$0.4 billion	Nov. 1971	Feb. 1972	Non-Cyclical

Unprecedented volumes of housing subsidies for low-income families provided by the HUD Act of 1968, as well as Fannie's rapidly expanding support of the FHA/VA market in 1968 and 1969, gave rise to concerns that middle income families were being neglected by federal housing policy (HUD (1987), pp. 29-30). According to a Treasury Department report, Congress was also seeking to create more efficient mechanisms to resolve the chronic regional mismatch between savings deposits and the demand for mortgage credit (Treasury (1990), p. B-1). Among the other concerns motivating calls for renewed housing finance reform, Bartke (1973) cited the declining share of national resources invested in housing, the fact that the housing sector had consistently borne the brunt of tight money policies, and views that the burdens of monetary policies should be shared more equitably.

Legislation permitting Fannie to expand into the conventional mortgage market was introduced in Congress in September 1969. The bill additionally proposed the establishment of a new secondary market entity, tentatively named the "Federal Mortgage Marketing Corporation," to provide secondary market support for the S&L industry. The Federal Reserve expressed strong reservations to expanded secondary market operations, but the Emergency Home Finance Act of 1970 was enacted on July 24, 1970, its passage aided by robust support from segments of the housing and mortgage industries. The enacted version of the bill created the Federal Home Loan Mortgage Corporation to support the S&Ls (see FHLMC, Sec. 4.2), and also extended Fannie's purchase authority to include the conventional mortgage market, subject to the approval of the HUD Secretary. Fannie's purchases would initially be statutorily limited to 'conforming' mortgages with LTVs not to exceed 75% unless the seller (1) retained a 10% participation, (2) agreed to repurchase the loan in case of default within three years, or (3) the amount of the loan in excess of 75% was privately guaranteed or insured. Conforming mortgage amounts could not exceed limits under the FHA Section 203(b) program, currently set at $33,000 as of December 24, 1969 (see above). The dollar limits were intended to avoid diversion of scarce credit from housing production for low- and moderate-income households.

The Act also authorized HUD to make certain interest-subsidy payments to Fannie for mortgages purchases during periods of high-mortgage interest rates, and provided Ginnie Mae with increased special assistance purchase authority (see GNMA, Sec. 4.3).

The stated purpose of the conventional mortgages program was not only to pump a modest amount of additional funds into housing, but also to eventually popularize a more standardized and marketable conventional mortgage in-

strument. An accompanying committee report stressed that expansion into the conventional mortgage market was not intended to compromise Fannie's primary role supporting a secondary mortgage market for FHA/VA mortgages, noting "*the committee has been assured that FNMA will take whatever action is appropriate to prevent its expansion into the conventional field from jeopardizing the soundness of its credit or from adversely affecting its traditional role in buying and selling FHA and VA mortgages. The committee wants to remind FNMA that it was set up primarily for FHA and VA mortgages and that conventional mortgage purchasing should in no way diminish its support of the FHA and VA market.*" (Senate Committee on Banking and Currency (1970), p. 7)

On December 3, 1970, Fannie announced tentative details of its pending new conventional program, stating that it aimed to purchase between $300 and $500 million in 1971 (The Wall Street Journal (12/03/70)). Conventional mortgages of $10,000 to $33,000 for single-family owner-occupied houses were to be purchased via a free market system auction, similar to its purchases of FHA/VA mortgages. Noting that its tentative plan was already being postponed one month because of a rights issue, Fannie stated that it hoped to enter the market by February 1971, conditional on approval from the HUD Secretary, which the agency hoped to secure by January 1, 1971. Program approval to buy conventional mortgages was granted in a letter from the HUD Secretary to Fannie's president on January 25, 1971. The implementation of the program was, however, significantly delayed because of the difficulties involved with drafting uniform mortgage contracts and other instruments needed for packaging loans from across the United States. Fannie and Freddie had struggled for months to negotiate uniform contracts, but eventually failed to reach compromise over prepayment; Fannie's contracts, published in November, would allow prepayment without penalty and allow the buyer of an existing home to assume the previous owner's mortgage; on the insistence of the thrifts, whereas Freddie's contracts included prepayment penalties and non-assumption provisions (The Wall Street Journal (12/16/71)). Consumer and civil rights groups—strongly favoring penalty free prepayment options—had also slowed the development of contracts, and under pressure, Fannie revised its conventional mortgage guidelines in late 1971. On November 15, 1971, it was announced that HUD Secretary Romney had approved Fannie's standardized mortgage forms, clearing the final major regulatory hurdle ahead of launching conventional secondary market operations (The Wall Street Journal (11/15/71)).

In a news conference on December 15, 1971, Fannie announced the first auction involving conventional mortgages on single-family homes, to take place in February 1972 (The Wall Street Journal (12/16/71)). The first conventional single family mortgage purchase was made on February 15, 1972. In May 1971, Fannie President Hunter had projected that conventional mortgage purchases would initially not exceed $400 million per year (Hunter (1971) p. 834). We assign that initial estimate of an annualized $400 million for the year starting November 1971, upon Secretary Romney's approval of the consequential standardized mortgage contracts, as the initial impact upon Fannie's portfolio from program expansion into the conventional market. In practice, Fannie purchased conventional mortgages totaling $55 million in 1972, $939 million in 1973 and $1.129 billion in 1974 (FNMA 1975 Annual Report).

The Act opening the doors for Fannie entering conventional mortgages was passed in the midst of the recession lasting from December 1969 through November 1970, but unlike many other provisions, Fannie's authorization was not representative of the Act's title or short-term focus. The accompanying Senate committee report characterized the Act as "*designed to encourage and expedite the construction and financing of a substantial number of new and existing homes. Primary emphasis is placed on the expansion of existing mortgage credit facilities and the creation of new secondary market facilities to broaden the availability of mortgage credit*" (Senate Committee on Banking and Currency (1970), p. 2). That report's general statement opened with economic concerns and countercyclical

motivations: "*It is obvious to the committee that economic conditions in this Nation are approaching a critical level, and that* ***immediate action is necessary if we are to avoid a further drop in the economy*** *and possibly a serious recession by the end of the year... The committee recognizes, of course, that the most important single factor causing our present dilemma is 'inflation.' Unfortunately, the policies currently being used by the administration to fight inflation are having an extremely disastrous effect on housing.*" The subsequent House committee report accompanying the lower chamber's version of the bill noted that "*The home buying public, the mortgage lending institutions, and the homebuilding industry are confronted with the highest interest rates in a century and an extreme scarcity of mortgage credit.... While this bill is an attempt to alleviate the immediate crisis, the committee will continue to work toward a solution to provide serious and* ***long-term changes to provide new sources of funds for mortgage credit.***" (House Committee on Banking and Currency (1970), pp. 4-5).[9]

Contrary to these nods to near-term stabilization, House Committee on Banking and Currency Chairman Patman emphasized that the only provision to improve the near-term housing outlook was the appropriation of $250 million to the FHLBanks for an interest rate subsidy, stating that the bill "*may contain some useful sections, but it nevertheless completely fails to provide a meaningful response to the Nation's housing crisis... The bill, in its present form, does not add one dollar to the country's pool of mortgage funds and because of this* ***it is an Emergency Home Finance Act in name only****. The* ***real effect of the bill in its present form is to appropriate more money to subsidize high interest rates*** *on loans made from a pool of mortgage funds that is now and will continue to be entirely inadequate to meet the Nation's housing needs.*" (House Committee on Banking and Currency (1970), p. 16.)

The House report explicitly characterized FNMA's authorized expansion into a conventional mortgage secondary market as foreword looking, acknowledging that it would take too long to implement to alleviate the current credit crunch and hasty action would be imprudent: "*If, as seems likely, the current money market situation should continue for some time,* ***FNMA should not implement this authority immediately****. A great deal of spadework should be done in the way of establishing an appraisal system, drafting uniform mortgage documents and making other preparations before FNMA could engage in the buying and selling of conventional mortgages to any significant degree. The time to begin these undertakings is now, so that FNMA will be ready to begin encouraging and* ***supplementing a market for conventional mortgages when the pressure on the FHA and VA market has eased****.*" (House Committee on Banking and Currency (1970), p. 7). The Senate report contained nearly identical language (Senate Committee on Banking and Currency (1970), p. 7). And as noted above, Fannie's first conventional mortgage purchases took place more than a year after the recession of December 1969 to November 1970 had ended, after a long deliberative process over mortgage contracts.

In his statement upon enacting the law, President Nixon emphasized the legislation as intended to "*alleviate the Nation's critical housing shortage*," both to meet "*growing demand for housing but also to make up the large housing deficit which has accumulated over the past 4 years, and to permit people to move from the many substandard housing units which are now in existence*" (Nixon (1970)). The statement noted that "*housing production is still substantially below desirable levels,*" but the emphasis was on permanently increasing the housing stock to meet demand, not increasing home production to stabilize the economy.

[9]The House report included the following estimate of the disproportionate impact of monetary tightening on housing: "*One member of the Federal Reserve Board has calculated that, whereas the home construction industry accounts for approximately 3 percent of the gross national product, 70 percent of the impact of a tight-money policy falls on the home construction industry.*" (House Committee on Banking and Currency (1970), pp. 11-12)

Consequently, while we classify most provisions of the bill as cyclically motivated, we take exception in classifying FNMA's conventional market program approval and subsequent expansion into that market as unrelated to the business and financial cycle, given its stated longer-term objective and intended delay in implementation (see listings under FHLMC, Sec. 4.2, and GNMA, Sec. 4.3).

Housing and Community Development Act of 1974 (Pub. L. 93-383) Enacted: August 22, 1974

Policy Change	Agency	Impact	News	Effective	Classification
Conforming Loan Limit	FNMA	+$1.14 billion	Aug. 1974	Aug. 1974	Non-Cyclical

The Act decoupled the limit on the outstanding balance of a conventional mortgage eligible for purchase by Fannie and Freddie from the FHA Section 203(b) limit, and instead tied it to the Section 5(c) limit for mortgages originated by insured S&L associations. Prior to the bill's enactment, the Section 5(c) limit was set at $45,000, above the $33,000 Section 203(b) limit. The reason for the change had more to do with the Freddie than with the Fannie (HUD (1987)). As the Senate Committee on Banking, Housing, and Urban Affairs report explained, it was "*not realistic to permit savings and loans to originate $45,000 mortgages and to restrict Freddie to the purchase of mortgages with a maximum principal mortgage tied to a varying FHA limit*" (Senate Committee on Banking (1974)). The change for Fannie apparently followed in order to roughly maintain parity between both GSEs (HUD (1987) p. 35). Adopted from the House bill, the Act also raised the FHA 203(b) limit to $45,000 and the savings and loans Section 5(c) limit to $55,000, with up to an additional 50% for dwellings in Alaska, Guam, and Hawaii. Hence, the Act raised the conforming loan limit for conventional mortgages by 66.67%, from $33,000 to $55,000. The conforming loan limit changes were effective upon enactment.

The House committee report stated that raising FNMA's loan limit from $33,000 to $55,0000 "*would permit FNMA to serve much the same housing market in terms of constant dollars as it was authorized to serve when the Emergency Home Finance Act was enacted*" (House Committee on Banking and Currency (1974), p. 29). The increase in the 5(c) limit was intended to "*help adjust the limit in line with the substantial increases that have occurred in recent years in the cost and value of single family homes, particularly in the nation's high cost areas*" (House Committee on Banking and Currency (1974), p. 43). The Senate Committee report noted that "*single family housing costs have increased between 20 and 25 percent since late 1969 when the FHA section 203 (b) limit was last set*" (Senate Committee on Banking (1974), p. 86). The report also noted that "*of the new homes built for sale today, 35% are now priced at $35,000 or over; 22% are priced at $40,000 or over. A recent study indicates that 25% of the sales of existing single family homes in the second quarter of 1973 were over $40,000; 46.6% were over $30,000.*"

The Act also increased the limit on Fannie and Freddie's aggregate portfolio holdings of conventional mortgages originated more than one year prior to purchase, from 10% to 20%. Other eligibility restrictions were relaxed and conventional purchases limited to mortgages up to 80% of the value of the property securing the mortgage, unless the seller (1) retained a participation of at least 20% (revised from 10%), (2) the seller agreed to repurchase the mortgage on demand, or (3) the excess over 80% was privately guaranteed or insured. The limit relaxations were deemed necessary in light of housing cost increases since the 1960s.

To quantify the impact of the increase in FNMA's conforming loan limit, we assume, pursuant to the House and Senate Committee report language, that the change would have restored FNMA's real purchasing power relative to

purchase volumes surrounding the December 1969 Section 203(b) increase and July 1970 enactment of the Emergency Home Finance Act. The $5.93 billion net purchase volume over 1969Q4 through 1970Q3 would have translated to $7.9 billion at the end of June 1974, adjusted for the 33.3% increase in OFHEO's seasonally adjusted Constant-Quality House Price Index for new homes sold over 1970Q3 and 1974Q2.[10] Relative to the $6.77 billion net purchase volume over 1973Q3 and 1974Q2, the year before enactment of the Housing and Community Development Act of 1974, this represents an increase of $1.14 billion, which we assign to the year starting August 1974.[11] In practice, Fannie's retained portfolio increased $2.41 billion in the year starting in 1974Q3, with its net purchase volume decelerating to $5.09 billion in the year starting in 1974Q3, down slightly from $6.77 billion in the preceding year.

While these policy changes were enacted in the midst of the recession lasting from November 1973 through March 1975, there is exhaustive evidence that the bill's origins considerably preceded the recession, and that the timing of the bill's enactment predominantly reflected the breaking of a longstanding political impasse unrelated to the business or financial cycle. The purpose of the bill stated in its preamble was "*To establish a program of community development block grants, to amend and extend laws relating to housing and urban development, and for other purposes.*" The accompanying Senate committee report asserted that "*the main thrust of the proposed legislation is to consolidate and simplifying existing [housing and community development] programs,*" and noted that the origins of the bill stemmed from the Administration's proposal for program consolidation in 1970, and subsequent failure of the House to act on a Senate-passed bill during the 92nd Congress (Senate Committee on Banking (1974), pp. 1-3).[12] Similarly, the supplemental views of Senators Tower, Packwood, and Brock in the accompanying committee report emphasized that "***The bill reflects the fact that major housing and urban development legislation has been delayed many years, with the last comprehensive bill enacted in 1968.*** *It is a long and complex measure...*" (House Committee on Banking and Currency (1974), p. 165).

The drive to resolve the multi-year congressional political impasse and pass a comprehensive housing bill had been amplified when the Nixon administration halted several HUD programs in January 1973, well ahead of the recession, based on political opposition to the Great Society housing legislation; a month later, the administration proposed entirely defunding community development programs in the FY1974 budget request.[13] While the Senate and companion House bills were introduced in February and June 1974, respectively, the Act was related to a myriad of

[10]We use annual volumes to smooth out seasonality and other idiosyncratic sources of volatility.

[11]The House bill containing the eventually enacted provisions had been finalized in June 1974, but the pertinent differences with the Senate bill's increase in the conforming loan limit was not resolved until the August 1974 conference committee bill.

[12]The House rules committee killed the 1972 bill by refusing to grant a rule for floor consideration. Underscoring the same point, the introduction and background of the bill in the House committee report begins as follows: "*The committee bill is the product of an extensive period of hearings and studies brought about by two acts of critical importance to Federal housing and urban development efforts: first, the rejection by the House Rules Committee in late 1972 of an omnibus housing bill which would have, in part, continued and expanded highly controversial housing subsidy programs; and second, the suspension of these programs by the President in January 1973.*" There is no mention of business or financial cycle concerns motivating the bill, but overwhelming concern with an "*effort to break the deadlock over HUD's housing and community development programs so that the Nation can resume its activities in these areas with broad political support.*" (House Committee on Banking and Currency (1974), pp. 1-2).)

[13]From the CQ Almanac: "*On Jan. 8, 1973, the Nixon administration announced a moratorium on all new commitments for major subsidized housing and urban programs in order to review what former HUD Secretary George Romney called "the entire Rube Goldberg structure" of housing and urban development laws. The moratorium also included a temporary suspension of interest subsidy programs for home ownership (section 235) and for rental and cooperative housing (section 236) under the National Housing Act. In addition, the administration's fiscal 1974 budget request did not include funds for community development programs, scheduled to be phased out and replaced in fiscal 1975 by the President's proposed urban community development revenue-sharing plan.*" (CQ (1975))

stalled housing bills, as there had been no comprehensive U.S. housing policy authorization since the Housing and Urban Development Act of 1969.[14] According to *CQ Almanac*, the Senate version of the bill largely resuscitated the bill killed by the rules committee in 1972, while making additional concessions to the Nixon administration (CQ (1975)). Despite the Senate's compromises, the HUD Secretary had threatened that President Nixon would veto the Senate version of the bill, and the bill was only eventually enacted in the early months of the Ford administration, following President Nixon's resignation.

In his statement on signing the Act, President Ford touted the legislation as "*far-reaching and perhaps historic significance, for it not only **helps to boost the long-range prospects for the housing market** but also marks a complete and welcome reversal in the way that America tries to solve the problems of our urban communities...**No one expects this bill to bring substantial immediate relief to the housing market,** but over the long haul it should provide the foundations for better housing for all Americans*" (Ford (1974)).

Given the bill's multi-year, stalled development, long-term, comprehensive focus on overhauling housing policy, and timing reflecting the breaking of a longstanding political impasse unrelated to the business cycle, we classify the bill and conforming loan limit increase as unrelated to the business cycle.

Housing and Community Development Act of 1977 (Pub. L. 95-128) Enacted: October 12, 1977

Policy Change	Agency	Impact	News	Effective	Classification
Conforming Loan Limit	FNMA	+$4.82 billion	Oct. 1977	Oct. 1977	Non-Cyclical

The Act raised the FHA 203(b) single-family limit from $45,000 to $60,000 and the S&Ls Section 5(c) single-family limit from $55,000 to $60,000. The Act also increased the conforming loan limits for conventional mortgages to 125% of the thrifts' 5(c) limit, thereby increasing Fannie's loan limit from $55,000 to $75,000 on net. The conforming loan limit changes were again effective upon enactment.

Title VII of the Act contained the Community Reinvestment Act (CRA), a law designed to reduce discriminatory lending by banks and thrifts, particularly mortgage lending, to low income neighborhoods by encouraging financial institutions to make loans to the area in which they operate; the CRA would play more of a role in the activity of Fannie and Freddie after imposition of affordable housing goals in the early 1990s.

The committee report accompanying the House bill, which more closely resembled the enacted law, explained that high rates of inflation compelled the loan limit increases, particularly to the FHA 203(b) limit: "*The most recent increase to $45,000 for the section 203(b) basic homeownership program (authorized by the Housing and Community Development Act of 1974) has not been adequate to restore the maximum to the same relationship to the price of a new home as prevailed in the mid-1960's when the FHA insured 15.3 percent of the new home market. In fact, the current limits have resulted in the widest gap between the maximum mortgage amounts and new home prices that has ever existed. To eliminate the gap, the committee bill established a new maximum insurable about of $60,000 for the section 203(b) program. The new limit is designed both to reflect increases in the prices of homes and mortgage amounts since*

[14]Prominent related bills include the Housing and Urban Development Act of 1970 (91 H.R. 16643); Housing and Urban Development Act of 1971 (92 H.R. 9688); Middle and Low Income Housing Act of 1971 (92 H.R. 1574); Community Development Assistance Act of 1971 (S. 2333); Housing and Urban Development Act of 1972 (92 S. 3248); Community Development Assistance Act of 1973 (S. 1744); Housing and Urban Development Act of 1973 (93 H.R. 10036); and the Housing Act of 1973 (93 S. 2507). ProQuest Legislative Insight cites more than 80 related bills introduced between 1969 and 1974.

1974 and to anticipate likely increases for at least the near future" (House Committee on Banking (1977a), p. 16). That report explained that increasing the 5(c) loan limit from $55,000 to $60,000, as adopted in the enacted conference report, was viewed as consistent with increasing the 203(b) loan limit from $45,000 to $60,000, and that the 25% higher conforming loan limit for Fannie and Freddie was "*necessary to adjust the limit to the increased cost and value of single family homes, particularly in high cost areas*" (House Committee on Banking (1977a), pp. 21, 25).

The Senate Committee report on a bill that would have increased the 5(c) limit from $55,000 to $65,000 without further increasing the Enterprises' loan limits stated that proposal was taken "*in response to the substantial increase in housing costs which have occurred since the ceilings were raised in 1974*" (Senate Committee on Banking, Housing and Urban Affairs (1977)). The conference committee rejected a proposal to further increase the loan limits in high cost areas, opting instead "*to adjust the maximum loan limit to keep pace with inflation, while preserving these limits as meaningful ceilings*" (House Committee on Banking (1977b)).

To quantify the impact of the increase in FNMA's conforming loan limit, we assume, pursuant to the House and Senate Committee report language, that the change would restore FNMA's real purchasing power relative to purchase volumes surrounding the August 1974 enactment of the Housing and Community Development Act of 1974 (see above). The $7.43 billion net purchase volume over 1973Q4 through 1974Q3 would have translated to $9.98 billion at the end of September 1977, adjusted for the 34.3% increase in OFHEO's seasonally adjusted Constant-Quality House Price Index for new homes sold over 1974Q3 and 1977Q3. Relative to the $5.16 billion net purchase volume over 1976Q4 and 1977Q3, the year before enactment of the Housing and Community Development Act of 1977, this would have represented an increase of $4.82 billion, which we assign to the year starting October 1977. To the extent that the enacted provisions were meant to anticipate further near-term inflation, we view this as a conservative estimate. In practice, Fannie's net purchase volume more than doubled to $10.44 billion in the year starting in 1977Q4, up $5.28 billion from the preceding year.

In his remarks upon signing the Act, President Carter noted that "*There's **no immediate solution** that can be offered*" to the housing needs of older and more distressed communities, and emphasized that the Act's cornerstone funding for the community development block grant would span the next three years (Carter (1977)). There was no mention of housing starts or contemporaneous economic conditions, or immediate stimulus to the housing market. Similarly, the accompanying report of the Senate Committee on Banking, Housing and Urban Affairs made no mention of near-term economic or other countercyclical motives (Senate Committee on Banking, Housing and Urban Affairs (1977)). Given the bill's long-term and comprehensive focus on overhauling housing policy, coupled with the lack of any discernible cyclical motive, we classify the bill and conforming loan limit increase as unrelated to the business cycle.

Expansion to Conventional Multifamily Mortgages February 1, 1978

On January 20, 1978, Fannie announced that conventional mortgages on two-to-four family houses would become eligible for purchase on February 1, 1978. Fannie chairman Oakley explained that "*We expect that this broadening of our conventional program should be especially helpful in urban areas, many of which have a large existing stock of two-to-four-family structures*" (The Washington Post (1/21/1978)). Because Fannie's entry into multifamily conventional mortgages does not appear to have required regulatory approval, it is not classified as a significant policy change.

1978 HUD Regulations (43 FR 36200) Issued: August 15, 1978

At the start of the Carter administration, HUD officials and some key members of Congress voiced concerns that Fannie had been putting too much emphasis on profit margins for its stockholders and was not fulfilling its public policy role of advancing national housing goals. In hearings before the Senate Committee on Banking, Housing, and Urban Affairs on June 7, 1977, newly appointed HUD Secretary Harris rebuked Fannie, stating that mortgage bankers were reluctant to make urban mortgage loans because they believed "Fannie Mae won't buy them." She also criticized her own agency during its previous tenure under Republican administrations for failing to exercise statutory authority over the company's operations (The Washington Post (6/8/1977)). Fannie was also criticized for ignoring its role in stabilizing mortgage credit across the financial cycle; since Fannie's privatization in 1968, its portfolio had only rapidly expanded, without any significant volume of mortgage sales despite the 1970s real estate boom-bust cycle.

On several occasions in early 1978, HUD delayed approvals of Fannie's borrowing authority, previously a routine matter, until the last moment.[15] In March 1978, HUD proposed new rules expanding regulatory powers and imposing tighter restrictions on Fannie, including a much more stringent approval process for individual debt issuance and a ceiling on short-term discount notes. After strong pushback from Fannie and the mortgage and real estate industries, HUD issued a weaker final regulation without short-term debt limits, but nonetheless expanding HUD's approval authority to encompass Fannie's obligations, securities, and other instruments (43 FR 36200).[16] The maximum debt-to-capital ratio of 25-to-1 was also written into the regulations. The regulations also established housing goals for low-and moderate-income housing and for housing located in central cities, with each goal set at 30% of total mortgage purchases (the "30/30" goals). Statutory authority for such targets had been set by the HUD Act of 1968, but hadn't previously been exercised. Fannie objected to the mandatory credit allocations on several grounds, notably that they ignored the FNMA Charter Act's statutory requirement to promote a "*reasonable economic return*" for the association. According to various reports, the 30/30 goals were never consistently monitored or enforced before 1992, and HUD collected insufficient mortgage data to monitor compliance with the goals (GAO (1996), p.82). As a result, we do not assign any impact of the 1978 HUD regulations on the size of Fannie's mortgage portfolio.

The new regulations did require Fannie to file an annual Business Activities Report, in large part based on the annual reporting requirements of the Securities and Exchange Commission. HUD also established a Fannie oversight unit after the issuance of these new regulations, but it was disbanded shortly thereafter by the incoming Reagan administration.

Housing and Community Development Amendments of 1979 (Pub. L. 96-153)

Enacted: December 21, 1979

The Act increased the savings and loans Section 5(c) mortgage limits from $60,000 to $75,000. On January 3, 1980, Fannie and Freddie announced a new conforming limit of 125% of this amount, or $93,750, up from $75,000 on single unit mortgages (The Washington Post (1/4/1980)). The Act also increased the FHA Section 203(b) loan limit for single family homes from $60,000 to $67,750.

In explaining the increase in the FHA 203(b) limit, the committee report accompanying the Senate bill noted that the median sales price of homes had jumped roughly 30% since the loan limits had last been increased by the Housing and Community Development Act of 1977 (see above), and that the FHA's market share had dropped from roughly 15%

[15]For example, see The Washington Post (2/11/1978).

[16]The approval authority expired on October 1, 1985 under the Secondary Mortgage Enhancement Act of 1984.

to 5% because loan limits had not kept up with inflation or the market (Senate Committee on Banking, Housing and Urban Affairs (1979), p. 14). Regarding the 5(c) limit, the report similarly explained that "*Because home prices have escalated 20 to 25 percent in the past 2 year, the committee believes that the $60,000 limit has become obsolete and is severely restricting the ability of thrifts to meet the borrowing amounts requested by today's home buying public*" and that increasing that limit to $75,000 was an adjustment to "*reflect inflation in home prices (and increase in mortgage size) since last amended in 1977*" (Senate Committee on Banking, Housing and Urban Affairs (1979), p. 20).

Applying the same methodology as in quantifying the impacts of the Housing and Community Development Acts of 1974 and 1977 (see above) implies no increase in net purchasing capacity from the increase in loan limits.[17] Hence we do not consider this a binding, significant policy change for Fannie Mae. The Act's loan limit increase, however, represented a smaller relative increase for Fannie and Freddie than the prior two increases, and the legislation did not carve out special additional increase for the Enterprises, unlike the prior legislative increase in loan limits.[18]

Housing and Community Development Act of 1980 (Pub. L. 96-399) Enacted: October 8, 1980

The Monetary Control Act of 1980 (Pub. L. 96-221), enacted on March 31, 1980, eliminated the thrifts' Section 5(c) loan limit. Because conforming loan limits for FNMA and FHLMC were set at 125% of the 5(c) limit, that Act also inadvertently eliminated loan limits for the GSEs. The Housing and Community Development Act of 1980 quickly restored conforming loan limits and established a formula for automatic annual adjustments. The limit for a mortgage on a single family unit was set at $93,750 in 1980, unchanged from the lapsed limit based the 5(c) loan limit, while higher limits were introduced for multifamily units. Beginning in 1981, annual upward adjustments were to be made, effective January 1 of each year, and equal to the year-to-October percentage change in the national average single-family home price for new and existing units, as reported by the FHLBB's survey of major lenders. Buildings with five or more units were limited to 125% of the FHA Section 207 insurance ceiling, and all limits could be increased by 50% for the high-cost areas of Alaska, Guam, and Hawaii. The legislative history does not contain any reason for or source of the formula, which was not subject to much scrutiny before enactment. The unintentional repeal of the conforming loan limits was unanticipated and there was no discussion in the House or Senate Committees on the new limits or adjustment formula (HUD (1987) p. 37). On December 23, 1980, Fannie and Freddie announced that the single-unit limit would be increased to $98,500 effective January 1, 1981 based on the new adjustment formula, up from $93,750 (Dow Jones News Service (12/23/1981)). According to *Dow Jones Newswire*, "*Fannie Mae said it was adjusting loan amounts upwards to keep pace with rising home prices*." FNMA also announced that the higher loan limit would be applied to all conventional mortgages with at least a 5% downpayment, whereas low downpayment loans were previously subject to a lower $75,000 ceiling (The American Banker (12/29/1980)).

The Housing and Community Development Act of 1980 additionally authorized Fannie to deal in loans secured by manufactured housing, subject to HUD approval. The last regulatory hurdle was cleared by a FHLBB ruling on July 28, 1981 clarifying that, regardless of ambiguities in state laws, mortgages on manufactured housing were considered real estate loans. In August 1981, Fannie announced that it would launch a nationwide program buying mortgages on manufactured housing (The Washington Post (8/15/1981)). We were unable to quantify or find an estimate of Fannie Mae's likely purchases of manufactured home mortgages, so we do not consider this a significant policy change.

[17] Applying a comparable methodology to Fannie's retained portfolio as opposed to purchases also suggested the policy change was not a binding constraint.

[18] This Act increased conforming loan limits by 25%, versus 66.7% and 36.4%, respectively, in the prior two increases.

And of particularly lasting consequence, that Act set in motion the creation of Fannie's MBS program, mandating that if Fannie submitted a MBS program for approval to the HUD Secretary or Treasury Secretary, their agency would have to approve said program within 90 days or transmit to Congress a report explaining why approval was rejected (CBO (1983)). Through fees for issuing commitments and guaranteeing timely payment, a program packaging and selling MBS to third parties was seen as a way to generate revenue while reducing the association's interest rate risk—a considerable prevailing concern given the Fed's policy stance. As off-balance sheet obligations, MBS were also excluded from capital requirements, making them an even more attractive source of revenue growth. In July 1981, Fannie announced that it would soon be launching an MBS program, with the first securities to be on the market by year's end. Fannie CEO Maxwell believed the program had "*the potential to attract billions of dollars from pension funds and other investors*," and explained that the program would behave similarly to GNMA's MBS program, but for the conventional mortgage market, which was four-fold the FHA/VA market being served by GNMA (The Bond Buyer (7/29/1981)).[19]

Authorization for Fannie Mae to issue MBS was approved by HUD on September 23, 1981 (HUD (1996), p. 52). The first Fannie-guaranteed MBS were issued in December 1981, in the amount of $0.7 billion; by the end of 1981, Fannie had committed to issue $3.3 billion in MBS (FNMA Annual Report 1981, p. 2). In 1982, the first full year of operation, Fannie issued $13.8 billion under its MBS program (HUD (1987), p. 78-79). Whereas mortgages sales were limited between 1968 and 1981, Fannie's new leadership decided to sell larger quantities of higher yielding mortgage assets through the new MBS program. Around $2.9 billion of the $13.8 MBS issuance in 1982 resulted from sales of its own portfolio, leaving roughly 79% of the total issuance securitized from new purchases.

We do not classify this as a significant policy change because of an inability to find any ex ante projections of Fannie's associated purchase or securitization volume in the first year or two of operations.

While the new MBS program hoped to attract billions of dollars into conventional mortgage financing, the appetite of investors to hold conventional MBS seemed somewhat uncertain relative to the thriving Ginnie Mae secondary market. Insufficient references and documented estimates could be found in the historical record to reliably quantify the estimated impact of this authorization on related purchases or securitization volumes, so this policy change is not considered significant. If it could be quantified, however, it would have been classified as cyclically motivated.

Adjustable Rate Mortgage Program Announced: June 25, 1981

Policy Change	Agency	Impact	News	Effective	Classification
ARM Program Approval	FNMA	+$0.4 billion	June 1981	Aug. 1981	Cyclical

On June 25, 1981, Fannie announced it would initiate a purchase program for eight types of variable-rate mortgages, with purchases to start on August 7, 1981 (The Washington Post (6/26/1981)). A Fannie spokesperson announced

[19] In an October publication in *The American Banker*, Maxwell elaborated on these themes: "*We predict the FNMA-guaranteed mortgage-backed security will do for conventional home lending what Ginnie Maes have done for government-backed loans. Ginnie Maes have achieved a volume of $120 billion, yet the FHA market they serve is a fraction of the size of the conventional market to be served by the FNMA security. The potential for housing is enormous, and so is the potential flow of fee income to FNMA. Because of their FNMA guarantee, their attractive yields, and their simplicity, our new securities will appeal strongly to both mortgage lenders and investors. We believe they will attract new funds into housing. To that end, we have worked closely with managers of major pension funds in designing our security. We will issue our first securities in November.*" (The American Banker (10/26/1981))

that commitments would first be made in late July, and that FNMA was unlikely to set any upward limit for August purchases (The American Banker (6/26/1981)). ARMs had first been authorized in primary markets earlier in 1981, as the FHLBB, Office of the Comptroller of the Currency (OCC), and National Credit Union Administration (NCUA) approved programs and lifted interest rate restrictions imposed on federally chartered banks and thrifts (45 FR 1425, 45 FR 79494, 46 FR 18932).[20] The FHLBB approving thrifts to issue adjustable rate loan issuance on April 21, 1981 (46 FR 24148) also paved the way for Freddie to purchase ARMs from FHLBank members (see FHLMC, Sec. 4.2). Without established secondary market support, however, mortgagors were initially hesitant to issue ARMs, and there was little issuance until Fannie and Freddie unveiled their secondary purchase program guidelines. Because secondary market entry into ARMs was de facto set in motion immediately following deregulation of the primary mortgage market, and was necessary for ARMs to catch on in primary markets, we consider entry into ARMs by Fannie and Freddie as driven by U.S. federal housing credit regulatory policy changes.

Upon its announcement, *The American Banker* reported that Fannie's program would be "*substantially broader than the purchase plan recently put together by the Federal Home Loan Mortgage Corp.*" Furthermore, industry analysts "*had said at the time the FHLMC plan was announced in late May that many lenders would likely postpone plans to sell ARMs until FNMA's program was disclosed*" (The American Banker (6/26/1981)). Four of Fannie's announced ARM products were negative amortization mortgages, which Freddie's program had not included at the time. Given the expectation of a larger ARM program for Fannie, and that no purchase estimate could be found for FNMA, we adopt the high-end estimate of FHLMC's ARM program, for an annualized impact of $400 million in the year starting June 1981.[21]

After Freddie and Fannie announced their ARM programs in May and June, respectively, thrifts rapidly began originating ARMs in the summer of 1981, but initially tended to prefer holding them in portfolio—to reduce their own interest rate risk exposure—rather than selling to the secondary market (HUD (1987) p. 135-136). But by the end of 1981, Fannie had made commitments to buy more the $1 billion in ARMs (FNMA Annual Report 1981, p. 2). During the first full year of the program in 1982, Fannie's purchases totaled $3.2 billion (HUD (1987), p. 71), and FNMA's purchase volumes of ARMs subsequently rose steadily. In 1984 and 1985, ARMs constituted over one-third of its retained portfolio purchases, reaching $7.1 billion in 1985, and about 20% of its MBS issuance. The share of ARMs in Fannie's retained portfolio increased from 5% in 1982 to about 18% in 1985 (HUD (1987), p. 71, Treasury (1990), p. A-32).[22]

On June 23, FNMA's chief economist leaked that Fannie would unveil its program on June 25, additionally confirming that multiple loan types would be purchased—including negative amortization loans—and market analysts reported that the program would be more expansive and flexible than FHLMC's ARM program (The American Banker (6/24/1981)). Breaking from a streak of falling prices and predominantly negative excess returns, Fannie's share price rose 2.5% on the June 23, a gain of 1.44 percentage points over the S&P 500 for the day. Shares flatlined on June 25 when the program was formally announced, slightly behind a 0.11% gain for the S&P 500.

The program expansion into ARMs was made in an environment of heightened interest rate risk and depressed

[20]The OCC ruling allowed an annual rate adjustment of up to 2 percentage points, and the FHLBB rules removed interest rate caps on variable rate mortgages (HUD (1987), p. 135).

[21]FHLMC President Brinkerhoff had projected that Freddie would purchase $500 to $600 million worth of ARMs in the first 18 months of the program's operations (see ARM Program listing under FHLMC, Sec. 4.2)

[22]Because of declining interest rates, the ARM share of purchases then dropped sharply to 4% in 1986, with their portfolio share edging down to 16%.

earnings resulting from monetary tightening, and the program took effect early in the recession lasting from July 1981 through November 1982 and in the midst of the credit crunch persisting from 1978Q2 through 1981Q4. Moreover, the ARM program was explicitly intended to help revitalize Fannie's balance sheet by reducing interest rate risk and increasing mortgage lending lending in light of Fannie's ongoing financial difficulties. HUD had estimated Fannie had a negative net worth of $7 billion in 1980 and $10 billion in 1981, and FNMA's program was intended to enhance profits (HUD (1987), p. 100). Consequently we classify the ARM program's approval and launch as cyclically motivated.

Second Mortgage Purchase Program   Announced: September 10, 1981

Policy Change	Agency	Impact	News	Effective	Classification
Second Mortgage Program Approval	FNMA	+$5.0 billion	Sep. 1981	Nov. 1981	Cyclical

In June 1981, Fannie appealed to HUD for approval of a second mortgage purchase program aimed at increasing the yield on its portfolio as well as lowering second mortgage costs. Because of high prevailing interest rates, many homebuyers were increasingly relying on second mortgages for home purchases, and Fannie argued it could help provide liquidity for this financing instrument. In 1980, between $15 billion and $20 billion worth of home equity loans were made nationwide, up from $3 billion to $4 billion in the mid-1970s (The Washington Post (8/8/1981)). Second mortgages, or home equity loans, have shorter maturities, and were thus also intended to improve Fannie's maturity match between assets and liabilities.

On July 9, 1981, the HUD Secretary submitted an interim rule, effective on publication August 3, 1981, redefining "mortgage loan" to allow FNMA to request approval for a second mortgage purchase program (46 FR 39434). The interim rule found that the FNMA Charter Act was consistent with Fannie dealing in secondary mortgages, but that standing HUD regulations defining mortgage loans were a barrier, and needed modification to keep up with the evolving structure of the housing market. The interim rule was accelerated, bypassing the customary notice of proposed rule making, initial comment period, and 30-day delay in its effective date, as a delay "*could cause unnecessary hardships to homebuyers and sellers who would benefit from the development of a secondary market in second mortgages, and to FNMA in forgoing profitable business transactions.*" The HUD Secretary later issued the interim rule for adoption without amendment on January 20, 1982, which was published on February 5 and to take effect March 18 (47 FR 5410).

Even before final adoption of the interim rule, HUD Secretary Pierce sent a letter on September 10, 1981 approving Fannie's request to purchase second mortgages, citing the need for liquidity as a key motivation. But against Fannie's wishes, HUD only granted explicitly temporary approval, set to expire on March 31, 1983. HUD viewed the program appropriate given the importance of second mortgages for housing finance in the high interest rate environment. But upon an anticipated return to more normal interest rates, HUD regarded the role of second mortgages allowing homeowners to access their home equity for non-housing purposes as outside of the Fannie's statutory purpose (HUD (1987), p. 171). In practice, however, this approval was extended several times and was later made permanent by the Housing and Community Development Act of 1987 (Pub. L. 100-242).[23]

[23] A June 27, 1983 letter extended authorization through September 30, 1984, and the Secondary Mortgage Market Enhancement Act of 1984 (Pub. L. 98-440) provided temporary statutory authorization, subject to further restrictions on the program (see below).

On November 19, 1981, Fannie officially announced that it would begin purchasing second mortgages beginning on November 30 (The American Banker (11/20/1981)). Fannie had recently estimated it could finance up to $5 billion worth of second mortgage loans a year (The Washington Post (8/8/1981)). We assign a $5 billion annualized increase in Fannie's potential retained portfolio in the year starting September 1981, when the program was first approved by the HUD Secretary. In practice, purchases totaled $0.176 billion in 1981, $1.552 billion in 1982, $1.408 billion in 1983, $0.937 billion in 1984, and $0.871 billion in 1985. There is no direct evidence explaining the reversal in purchases (HUD (1987) p. 71), but the decline in interest rates may have reduced demand for home equity loans from both consumers and Fannie.

Shares of Fannie rose 5.41% on July 10, 1981, posting 5.35 percentage points above the daily return on the S&P 500, when the HUD Secretary's interim rule redefined "mortgage loan" to accommodate a second mortgage program. Upon approval of Fannie's request on September 10, shares jumped another 5.36%, for an excess return of 3.89 percentage points above the S&P 500. No alternative explanation for these excess returns could be identified through news or other finance periodical sources.

FNMA's request was made in an environment of heightened interest rate risk and depressed earnings resulting from contractionary monetary policy, and the regulatory ruling was made in the midst of the recession lasting from July 1981 through November 1982. The regulatory approval process was also explicitly fast-tracked, suggesting that immediate economic concerns were paramount. For these and similar reasons for the approval of the ARM program, we classify the second mortgage program's approval and launch as cyclically motivated.

HUD Increases Debt-to-Capital Ratio to 30-to-1 (47 FR 58044) Announced: December 22, 1982

Policy Change	Agency	Impact	News	Effective	Classification
Increased Debt-to-Capital Ratio	FNMA	+$6.25 billion	Dec. 1982	Dec. 1982	Non-Cyclical

Subject to an adequately justified request by Fannie, a rule proposed on May 17, 1982 (47 FR 21093) and published unamended on July 22, effective September 10 (47 FR 31866), newly permitted the HUD Secretary to increase Fannie's debt-to-capital ratio by expedited means of publishing a notice in the federal register. Fannie had projected its debt-to-capital ratio would reach 25-to-1 by the end of 1982, and initially appealed to HUD for an increased leverage limit of 35-to-1, but subsequently modified the request to 30-to-1. The HUD Secretary granted the modified request on December 22, 1982, effective immediately, thereby increasing Fannie's cap on secondary market facility borrowing leverage from 25 to 30 times Fannie's capital, surpluses, reserves, and undistributed earnings (47 FR 58044).

Using 1981 year end regulatory capital of $2.5 billion (Department of the Treasury (1990), p. A-82), the implied maximum growth in mortgage assets is $12.5 billion ($2.5 billion $\times$ (30 - 25) = $12.5 billion). Using the two-year rule, we assign a $6.25 billion annualized increase in the year starting December 1982. In practice, Fannie's debt-to-capital ratio rose from 23.2 in 1981 to 25.9 in 1982 and 27.3 in 1983.[24]

Shares of Fannie rose 3.59% on December 22, 1982, when the HUD Secretary's rule modification was announced, closing 3.43 percentage points above the daily return on the S&P 500. Shares jumped more modestly when the ruling was published in the Federal Register on December 28, rising 1.01%, for an excess return of 2.0 percentage points

[24]Ratios are calculated at year's end based on balance sheet data reported by Treasury (Treasury (1990), p. A-11 and A-82).

above the S&P 500. No alternative explanation for these excess returns could be identified through newspapers or other finance periodical sources.

Both the request and HUD's eventual approval were made in order to improve Fannie's lingering balance sheet woes following the hefty interest rate increases of 1979 through 1981 (HUD (1987), p.95). After posting profits for its first 12 years of operations, Fannie sustained losses of $190 million in 1981 and $105 million in 1982, stemming from a negative interest rate margin, but Fannie was not legally allowed to diversify its portfolio away from housing assets. By year's end 1982, Fannie's net worth had fallen to $953 million, down 27% over two years, against an asset portfolio of $73.0 billion (Department of the Treasury (1990), p. A-11). Loosening Fannie's debt-to-capital ratio fit into a larger deregulatory effort to help both Fannie and the S&Ls recover, or "grow their way back to health," without a direct injection of public capital; Fannie and its regulators thus turned their attention to increased fee income, diversification into ARMs and second mortgages, and leveraged purchases of newly originated, high interest mortgages (GAO (1985)).[25] Agency status in particular was seen as enabling Fannie to grow its way out of its financial difficulties; by increasing the debt-to-capital ratio, HUD allowed Fannie to finance new activity with debt instead of equity. The timing of the approval was crucial, as it permitted Fannie to increase borrowing at relatively favorable interest rates.

Increasing Fannie's profitability was also seen as a key intermediate step to fully privatizing the GSEs. The 1982 Report of the President's Commission on Housing concluded that Fannie and Freddie "*should play important roles in the development of markets for conventional mortgage passthrough securities. Federal policy should encourage the operation of FNMA and FHLMC as private corporations that retain limited benefits arising from Congressionally mandated commitments to housing... Eventually, both FNMA and FHLMC should become privately owned corporations with common responsibilities and advantages.*" (The President's Commission on Housing (1982), pp. 167-168). The report concluded, however, that a transition period was first needed to address "*FNMA's profit problem*," which put Fannie at a serious competitive disadvantage relative to the newly recapitalized FHLMC, which had significantly less interest rate risk exposure heading into the the recession and credit crunch. The administration wanted to help Fannie return to a "*positive profit position*" before phasing out "*FNMA's Treasury backstop borrowing authority and agency status for its obligations*" (The President's Commission on Housing (1982), p. 168).

FNMA's request was made during the recession lasting from July 1981 through November 1982, and HUD's approval was granted shortly after the recession's end. But following monetary easing in the second half of 1981 and a drop in mortgage rates that fall, the housing market had begun recovering in late 1981 (FRB February 1983), and interest rate risk had considerably abetted by late 1982. Final approval was also made more than seven months after the enabling rule was first proposed, in stark contrast to the rapid and explicitly fast-tracked regulatory approval process for Fannie's second mortgage program in 1981 (see above). Because both the request and its approval seemed motivated by repairing the balance sheet damage of cumulative losses in 1981 and 1982, helping to advance the administration's longer-term objective of privatization, and avoiding the possibility of a public capital infusion, we classify the regulatory ruling as largely politically motivated and contemporaneously unrelated to the business cycle.

[25] A number of legislative actions around this time underscore this deregulatory approach. The Mortgage Purchase Amendments of 1981 (Pub. L. 97-110), enacted December 26, 1981, amended the FNMA Charter Act and the FHLMC Act to remove the portfolio limitations on the GSEs' holdings of conventional mortgages over one year old, which were previously limited to 20% of investments. The Garn-St. Germain Depository Institutions Act of 1982 (Pub. L. 97-320), enacted October 15, 1982, largely served to loosen regulations on the S&Ls in an effort to improve their beleaguered balance sheets. To facilitate recapitalization, that Act additionally permitted Fannie to issue preferred stock and made such stock freely transferable. And the Miscellaneous Revenue Act of 1982 (Pub. Law 97-362), enacted October 25, 1982, changed Fannie's net operating loss carryback and carryforward tax rules to improve its balance sheet.

Secondary Mortgage Market Enhancement Act of 1984 (Pub. L. 98-440) Enacted: October 3, 1984

The Act aimed to remove barriers to the issuance of private-label (non-GSE) MBS. The goal was to greatly expand the private sector's role in the growing market for MBS, which was dominated by regulation-favored Fannie and Freddie. The Act, for instance, newly allowed state-regulated pension funds and insurance companies to invest in private MBS and removed state and federal limitations on thrift and bank private MBS holdings. The Act additionally introduced several amendments to the FNMA Charter Act and FHLMC Act, as well as clarified and modified several of HUD's regulatory powers over Fannie (HUD (1987)). The Act eliminated HUD's approval authority, established in HUD's 1978 regulatory rulings, over issuances of obligations, securities, participations or other instruments, effective October 1, 1985, but maintained HUD's approval authority over stock issuances and debt obligations convertible into stock (HUD (1987)). It also required HUD to approve or disallow additional programs within 45 days (60 if it required additional information from Fannie). The Act extended the second mortgage purchase authority without a HUD approval requirement, but with a sunset on October 1, 1987; subordinate mortgages were also limited to 50% of the conforming loan limit and the sum of all liens on a property had to cumulatively adhere to LTV ratios.[26] These changes were perceived as reducing regulatory delays and increasing Fannie's flexibility to respond to market conditions (GAO (1985), p. 104). Finally, the Act forced HUD to meets its requirement to submit an annual report on Fannie to Congress, which did not happen until 1987 (HUD (1987)).

Beyond modifying various regulatory authorities over and powers of Fannie, the Act would greatly expand the private sector's role in the growing market for MBS.

HUD Decreases Debt-to-Capital Ratio to 25-to-1 Announced: April 21, 1987

Policy Change	Agency	Impact	News	Effective	Classification
Decreased Debt-to-Capital Ratio	FNMA	-$2.7 billion	Apr. 1987	Dec. 1987	Non-Cyclical

The Tax Reform Act (TRA) of 1986 (Pub. L. 99-514, enacted October 22, 1986) authorized Real Estate Mortgage Investment Conduits (REMICs), which are flexible collateralized mortgage obligations granted favorable tax treatment. Congress intended REMICs to provide another source of mortgage funds and expand the volume of mortgage credit. Based on their favorable tax treatment, market analysts predicted REMICs would eventually become the dominant instrument in the secondary mortgage market.

Fannie quickly announced its intentions to enter the REMIC market, which drew strong opposition from private mortgage lenders concerned that quasi-agency status gave FNMA an unfair competitive advantage that could be used to drive the private sector out of the market. HUD approval was not required for REMICs backed by FHA/VA loans, but was required for REMICs backed by conventional mortgages. On November 17, 1986, HUD issued a complaint to Fannie for its failure to request approval for its proposed REMIC program, most of which would be backed by conventional mortgages. On December 17, 1986, Fannie issued its first REMICs, a $500 million sale backed strictly with FHA/VA mortgages.

On January 21, 1987, Fannie requested HUD's approval for REMICs backed by conventional mortgages (HUD (1987) p. 175-176). On April 21, HUD approved limited REMIC issuance backed by conventional portfolio and

[26] Second mortgage limits were previously the same as first mortgage limits.

non-portfolio mortgages, of up to $15 billion and with authorization expiring June 30, 1988 (The American Banker (4/23/1987)). HUD's ruling also included a requirement that Fannie Mae participate in a serious study with HUD, in order to develop legislation for fully privatizing the association. The rule also immediately lowered Fannie Mae's debt-to-capital-ratio from 30-to-1 to 25 to-1, which the HUD Secretary stated would be further reduced to 20-to-1 by December 31, 1988. The financial press interpreted the scheduled December reduction as a definitive constraint, with *The Bond Buyer* characterizing the HUD Secretary as having"*directed Fannie Mae to* ***boost its capital or shrink its balance sheet***" and elaborating that "*The agency will be required to lower its debt-to capital ratio to 25-to-1 from 30-to-1 immediately and to reduce it to 20 to-1 by the end of 1988.*" (The Bond Buyer (4/22/1987)).[27]

The HUD Secretary explained that "*The Reagan administration has long sought to shrink the federally sponsored corporations that operate the secondary mortgage market and to leave as much of the business as possible for the private sector.*" In an April 21 letter to Fannie's chairman, the HUD Secretary explained that he was concerned Fannie would dominate the REMIC market and was acting in accordance with "*the desire of the administration to move Fannie Mae toward privatization*" (The Wall Street Journal (4/22/1987)).[28] Fannie CEO Maxwell suggested that the capital reductions would require balance sheet adjustments, but the agency was willing to comply without a fight in exchange for securing REMIC market entry, stating "*FNMA readily accepts the reductions in debt-to-capital ratio. They are in line with our objective of lowering the company's leverage*" (National Mortgage News (4/27/1987)).

At year's end 1986, the regulatory ratio of unsecured debt-to-capital was 27.7 and regulatory capital was $3.3 billion, the same level as in 1984 and 1985 (Treasury (1990) p. A-82). The decrease in the debt-to-capital ratio therefore suggest an eventual capital shortfall of $1.3 billion ($3.3 billion $\times\left(\frac{27.7}{20}-1\right)$ = $1.3 billion). Taking into account a $375 million common stock issue in February and conservatively assuming that 75% of the remaining shortfall was eliminated by increasing retained earnings or loan loss reserves suggests a reduction in Fannie's $94.167 billion asset portfolio of roughly $4.73 billion ($94.167 billion $\times\left(\frac{3.3+0.375+0.75\times(1.3-0.375)}{3.3+1.3}-1\right)$ =-$4.73 billion) at 1986 levels by the end of 1988. Annualizing we assign a $2.70 billion decrease in Fannie's portfolio capacity from the reduced debt-to-capital limit, starting in April 1986 ($4.73 billion $\times\frac{12}{21}$ = $2.7 billion).[29]

The development of the REMIC market following the TRA of 1986 and HUD's subsequent decision to allow REMIC issues by Fannie did not directly affect the supply of MBS, because the GSEs mostly re-securitized outstanding agency MBSs. Instead, the issuance of tax-preferred REMICs backed by Fannie MBS created an overall greater

[27] *National Mortgage News* similarly characterized the regulatory moves as follows: "*the HUD official ordered an immediate reduction in Fannie Mae's leverage to a debt/equity ratio of 25-to-1 and a further cut to 20-to-1 before the end of 1988*" (National Mortgage News (4/27/1987)).

[28] HUD lifted several of the restrictions of REMIC issues on April 20, 1988. Fannie was allowed to issue up to a total of $20 billion of REMICs until authority expired September 30, 1989, an expansion from the previous limit of $15 billion through July 20, 1988. Citing continued fears by thrifts and investment banks that Fannie would unfairly dominate the new REMIC market, HUD refused to give the secondary mortgage market operator the permanent, unlimited issuance authority its officials had sought. Fannie had issued about $4 billion of REMICs at the time, and its executives said the additional $16 billion in authority would be adequate for expected market demand (The Wall Street Journal (4/21/1988)). On October 13, 1988, HUD granted Fannie permanent and unlimited authority to issue REMICs. This unexpected regulatory reversal came as Congress was preparing to circumvent HUD and statutorily grant Fannie such authority. A Fannie official explained that "*No federal agency wants to see its authority upstaged by Congress*" (The Wall Street Journal (10/14/1988)).

[29] Corroborating this scoring, the *American Banker* reported that "A Fannie Mae spokesman said the agency's current debt-to-capital-ratio there is 21.7-to-1" (The American Banker (4/23/1987)) following Fannie's common stock issue. Meeting the remaining debt-to-capital shortfall through portfolio reductions alone would require asset sales of $7.38 billion between April and December 1987 ($94.167\times(\frac{21.7}{20}-1)=-7.38$), relative to assets at year's end 1986. Our estimated portfolio reduction of $2.7 billion is consistent with this score, making further allowances for capital growth through retained earnings.

demand for MBS (FNMA Information Statement March 30, 1992, p. 32). As such, we do not attribute any change in Fannie's purchases resulting from HUD's approval of REMIC issues.

Both lowering Fannie's debt-to-capital ratio and the coincident, reluctant approval of limited REMIC issues clearly reflected the Reagan administration's anti-GSE sentiments. Various other actions of the Reagan administration further illustrate their efforts to pressure Fannie and Freddie toward privatization. For instance, the administration had started threatening legislation to permanently limit the GSEs mortgage purchase authority in early 1987. The administration's FY1988 Budget touted that "*The administration is studying ways of privatizing the [Fannie Mae] and the [Freddie Mac]... The administration also plans to propose legislation that will limit permanently the maximum amount of a mortgage these Government-sponsored enterprises can purchase. This will limit their continued encroachment on the market served by private firms for as long as these entities enjoy the advantages conferred by their association with the Federal Government*" (Budget of the United States for Fiscal Year 1988, 2-48). The Office of Management and Budget (OMB) proposed that the GSEs' loan limits be frozen at "*the lesser of the new $153,000 ceiling or the 75th percentile of home sales prices for each standard metropolitan statistical area*" (National Mortgage News (1/12/1987)). Freddie Mac had estimated the proposal would have reduced the number of mortgages Fannie and Freddie could purchase by 20% (Cocheo (1987)).[30] The administration had also proposed imposing user fees for programs run by Fannie and Freddie.

While the charters of Fannie and Freddie were consistent with issuing REMICs and the TRA 1986 was explicitly supportive of REMIC issues by FNMA and FHLMC (GAO (1988), pp. 40-41), authority to enter the conventional market was by no means guaranteed, given the Reagan administration's hostility. The decision—including its accompanying decrease in the debt-to-capital ratio—and its timing appear somewhat unanticipated: On the news of REMIC authorization common shares of Fannie jumped 4.0% on April 21, 1987, for an excess return of 1.5 percentage points above the S&P 500. The following day shares fell 4.8 percentage points, for negative excess return of 2.8 percentage points below the S&P 500, although first quarter earnings reported that day missed analysts' expectations.

Because the conventional REMIC authorization and decrease in the debt-to-capital ratio were made when the economy was neither in recession nor experiencing a credit crunch, and because shrinking Fannie's leverage ratio was explicitly intended to rein in Fannie and advance the Reagan administration's objective of GSE privatization, we classify the policy change as politically motivated and unrelated to the business cycle.

Housing and Community Development Act of 1987 (Pub. L. 100-242) Enacted: February 5, 1988

The Act made permanent the authorization for Fannie and Freddie to purchase second mortgages on single-family properties. It also banned imposing any user fees for programs run by Fannie and Freddie, which the Reagan Administration had recently proposed as a step towards full privatization (see above). The bill was enacted despite the administration's objections, and thwarted many of its recent efforts to reduce the federal role in housing markets, effectively killing momentum toward GSE privatization for well over a decade. A Treasury official explained that "*We had too many other other problems and we didn't have enough political capital to take on Fannie and Freddie...*" (Hagerty (2012) p. 73). The administration's focus had pivoted to the collapsing S&L industry and fallout from the Latin American debt crisis. Beyond the GSEs' effective lobbying efforts on Capital Hill, Wall Street and the Mortgage Bankers Association weren't keen on the GSEs and primary mortgage markets, respectively, loosing access to cheap

[30]The conforming loan limit freeze was never implemented, and the limit was subsequently raised to $168,700, a 10.2% increase, based on the adjustment rule introduced by the Housing and Community Development Act of 1980 (see above).

funding (Hagerty (2012), pp. 72-73).

Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (Pub. L. 101-73)

Enacted: August 9, 1989

The Financial Institutions Reform, Recovery, and Enforcement Act (FIRREA) of 1989 primarily served as a major regulatory overhaul of the thrift industry and Federal Home Loan Bank System in response to the S&L crisis. It established the Resolution Trust Corporation (RTC) to wind down insolvent thrifts, abolished the FSLIC and transferred S&L deposit insurance to the FDIC, and moved regulatory oversight of Freddie from the FHLBB to HUD. The Act also contained several provisions affecting Fannie, most notably by amending its statutory purpose to read as follows (revisions underlined):

> "*SEC. 301. The Congress hereby declares that the purposes of this title are to establish secondary market facilities for home mortgages, to provide that the operations thereof shall be financed by private capital to the maximum extent feasible, and to authorize such facilities to*
>
> *"(1)* ***provide stability*** *in the secondary market for home mortgages;*
>
> *"(2) respond appropriately to the private capital market;*
>
> *"(3)* ***provide ongoing assistance*** *to the secondary market for home mortgages (including mortgages securing housing for* ***low- and moderate-income families*** *involving a* ***reasonable economic return****) by increasing the liquidity of mortgage investments and improving the distribution of investment capital available for home mortgage financing; and"*
>
> *"(4) manage and liquidate federally owned mortgage portfolios in an orderly manner, with a minimum of adverse effect upon the home mortgage market and minimum loss to the Federal Government.*

Of particular note, FIRREA modified Fannie's statutory purpose from providing "supplemental" assistance to the mortgage market with directions to providing "stability" and "ongoing assistance" to the secondary mortgage market. These charter revisions charged Fannie with maintaining a continuous presence in the secondary market (1990 Treasury Report, p. A-5). The revised statement of purpose also newly expanded Fannie's responsibility to support mortgages for low- and moderate-income families involving a "reasonable" economic return. Prior language set by the 1954 Charter Act had more narrowly only promoted "providing a degree of liquidity," supporting special assistance programs for certain mortgages, and intervening "as a means of retarding or stopping a decline in mortgage lending and home building activities which threatens materially the stability of a high level national economy" (see above).

Freddie Mac, which had previously operated without a statutory statement of purpose, was also rechartered with an identical statutory purpose. An accompanying House Committee Report elaborated upon the revised role Congress envisioned for Fannie and Freddie: "*A* ***primary purpose is to provide stability in the secondary market for home mortgages including mortgages securing housing for low and moderate income families****. This can be* ***accomplished through both portfolio purchasing and selling activities, as well as through the securitization of home mortgages****. The* ***continuous presence of the FHLMC and FNMA in the secondary market in bad as well as good economic times*** *provides assurances of a dependable and substantial funding source for home mortgages. FHLMC and FNMA are also required to respond appropriately to the private capital market. They must take a leading role in developing and marketing new and innovative finance and mortgage products and assure that their products are responsive to the changing demands of the capital market. Lastly, FHLMC and FMNA are responsible for providing ongoing support to the secondary mortgage market. They should increase the liquidity of mortgage investments by refining and improving*

their securitization and credit enhancement products, as well as developing new products that add to the liquidity of mortgage investments. They should improve the distribution of investment capital available for home mortgage financing by seeking to attract new, in addition to traditional, sources of mortgage investment" (House Committee on Banking (1989), p. 2). Put differently, FIRREA did not so much usher in mission creep for Fannie and Freddie, but rather mandated a considerably expanded role in U.S. mortgage finance.

FIRREA established tougher risk-based capital standards for thrifts, but not for Fannie or Freddie. The Act had the effect of increasing demand for agency MBS by thrifts, since Fannie Mae and Freddie Mac securities received a lower risk weight than whole loans, encouraging thrifts to swap their whole loans for agency MBS (HUD (1996), p. 57). Similarly, the Act increased the FHLBanks' demand for agency MBS, as the FHLBS was under pressure for increased gross earnings needed to meet the Act's new assessments on its earnings (Hoffman and Cassell (2010), pp. 55-57).

In bailing out insured deposits at failed thrifts, Congress was forced to recognize that the perceived implicit government guarantee backing Fannie and Freddie also posed a considerable potential liability for taxpayers (Hagerty (2012), p. 77). But Congress punted such concerns a few years down the line, with FIRREA mandating that Treasury conduct two annual studies analyzing the safety and soundness of the GSEs and granting GAO auditing authority over Fannie's mortgage transactions. The preliminary Treasury report, released in March 1990, concluded that existing capital regulations—principally HUD's leverage ratio—were inadequate because of the exclusion of outstanding MBS, which were still held off balance sheet. The report was particularly critical of Fannie, most notably of its credit stress test model and capital management practices. In a counterfactual application of bank and thrift capital standards, the 1990 Treasury report found that Fannie did not come close to meeting capital requirements for banks and thrifts (Treasury (1990) p. A-73). The report spurred Fannie to strengthen its capital base in anticipation of legislation imposing stricter capital requirements (see the discussion of FHEFSSA below).

Cranston-Gonzalez National Affordable Housing Act of 1990 (Pub. L. 101-625)

Enacted: November 28, 1990

The Act expressed the view of Congress that "every American family be able to afford a decent home in a suitable environment," and outlined seven objectives and related policies to advance that goal. The Act overwhelmingly directly affected the FHA, HUD, and state-level Public Housing Agencies, as opposed to the GSEs. But it nonetheless marked a distinct shift in the stance and objectives of U.S. federal housing policy with respect to mortgage finance for low- and moderate income households that would soon be felt by Fannie and Freddie (see below). Signing the bill into law, President George H.W. Bush declared the Act "*an exciting bipartisan initiative to break down the walls separating low-income people from the American dream of opportunity and homeownership*" (Bush (1990)).

Federal Housing Enterprises Financial Safety and Soundness Act of 1992 (Pub. L. 102-550)

Enacted: October 28, 1992

Policy Change	Agency	Impact	News	Effective	Classification
Capital Requirements	FNMA	-$4.25 billion	Mar. 1990	Mar. 1990	Non-Cyclical
Affordable Housing Goals	FNMA	+$1.0 billion	July 1991	Jan. 1993	Non-Cyclical

Spurred on by general concerns about taxpayer-funded financial bailouts in the aftermath of the S&L crisis and Trea-

sury's reports on the GSEs mandated by FIRREA, the capital adequacy of Fannie and Freddie became a focal point in the early 1990s. An April 1990 report by CBO concluded that Fannie and Freddie were "*reasonably well capitalized relative to, and pose a low level of risk of loss to the government from, their exposure to credit risk and interest rate risk*" (CBO (1991), p. xviii). But shortly thereafter, the Treasury Secretary's May 1990 report on the GSEs—the first of the two annual studies mandated by FIRREA investigating the risks posed by the GSEs—concluded that Fannie was undercapitalized, though it deliberately refrained from quantifying the degree of the shortfall (Treasury (1990)).[31] The final April 1991 Treasury report, as well as a May 1991 GAO report, both called for tougher regulatory oversight of the housing GSEs (GAO (1991)). With presidential support, Congress subsequently prepared legislation establishing a new regulator as an independent arm of HUD, to be charged with developing new risk-based capital standards for the GSEs, among other roles.

On October 28, 1992, President George H.W. Bush signed into law the Housing and Community Development Act of 1992 (Pub. L. 102-550). Title XIII of the Act, named the Federal Housing Enterprises Financial Safety and Soundness Act (FHEFSSA), established the Office of Federal Housing Enterprise Oversight within HUD as the new regulator of Fannie and Freddie. Lobbying efforts by Fannie to weaken the legislation were, however, widely considered successful. In anticipation of the Senate vote's on the Act, the *New York Times* commented that the proposed bill "*satisfies Fannie Mae and Freddie Mac but does not go nearly far enough to appease their critics, who contend that the two investor-owned companies enjoy an implicit Federal guarantee on loans that could someday cost taxpayers billions of dollars if defaults soared on mortgages... Drafted in response to fears of a future burden on taxpayers, the bill has been so watered down that Fannie Mae and Freddie Mac are in the slightly odd position of lobbying for a bill to impose regulations on them*" (The New York Times (6/29/1992)). Compared to the federal regulators of banks and thrifts, OFHEO was structurally weak and had few legal enforcement powers (FCIC (2011), p. 40, Hagerty (2012), pp. 91-93). The new regulator had little flexibility to adjust capital requirements and was dependent upon Congress for its annual budget request, rather than charging the entities it regulated for related costs, as was the case for all other regulators. The Act also rescinded the requirement of HUD approval for all issues of stock and securities convertible into stock, unless Fannie or Freddie failed to meet capital standards.

One of the main provisions of the Act affecting Fannie was the introduction of new statutory capital requirements and the mandate that OFHEO develop risk-based capital standards based on stress tests. Taking into account Treasury's concern about the Enterprises' unfunded off-balance sheet MBS liabilities, a statutory *minimum capital* requirement was set at the greater of 2.5% of aggregate on-balance sheet assets or 0.45% of the unpaid principal balance on outstanding MBS and equivalent off-balance sheet instruments. OFHEO was to determine what off-balance sheet assets had a similar credit risk as mortgage-backed securities and would thus be subject to the 0.45% minimum capital requirement. The minimum capital requirements were scheduled to take effect on April 28, 1994, preceded by an

[31] The introduction of the preliminary May 1990 Treasury study was clear about the GSEs' special status: "*GSEs are in an unusual position. While other corporations are able to diversify their operations, GSEs are mandated to serve specific credit needs in a single business area, which makes them particularly vulnerable to economic downturns in these areas. Furthermore, the financial risks inherent in institutions of this size pose a greater systemic risk that cannot be completely hedged or eliminated... Some GSEs are among the most thinly capitalized of major U.S. financial entities. Unlike other private sector corporations, GSEs are not subject to the usual market-imposed disciplines of increased cost or reduced access to capital as their balance sheet leverage increases beyond normally prudent levels. This is due to the market's perception of a unique and special relationship to the Federal Government. Market participants believe that, if a GSE experiences extreme financial difficulties, Congress would step in to ensure that debt holders and investors in GSE-guaranteed securities would experience no losses*" (Treasury (1990), pp. 7-8).

18-month transition period with slightly less stringent minimum capital requirements of 2.25% and 0.4%, respectively, assed upon on-balance sheet assets and off-balance sheet instruments. If capital fell below the minimum level, the OFHEO Director could limit increases in obligations and growth in assets. The Act also established a *critical capital* requirement of 1.25% of aggregate on-balance sheet assets and 0.25% of the unpaid principal balance on outstanding MBS and equivalent off-balance sheet instruments; if core capital fell below these thresholds, Fannie would be classified as critically undercapitalized and required to be placed in conservatorship. Finally, the Act mandated that OFHEO devise supplemental *risk-based capital* standards that could be more stringent than the statutory standards. The risk-based capital level was to be set at 130% of the amount necessary to withstand 10 years of severe credit stress, with the extra 30% designed to protect against management and operations risk.[32]

Apart from the capital regulations, the 1992 Act also imposed new affordable housing requirements and extended HUD's authority to set affordable housing goals. As mission regulator, the HUD Secretary was required to set three classes of housing goals for: 1) low- and moderate-income housing; 2) housing in central cities, rural areas, and other underserved areas; and 3) special affordable housing for low- and very low-income families.[33] During a two-year transition period following its enactment, the Act set interim targets for each of the first two goals equal to 30% of the total number of units financed. The HUD Secretary was additionally required to establish a separate annual interim goal for the two-year transition period, and was authorized to set annual goals thereafter. The amounts under the first two goals were essentially the same as the 30/30 percentage goals that had been previously established for Fannie Mae under HUD's 1978 regulations (see above). Under the additional special affordable housing goal, Fannie was obliged to cumulatively purchase an additional $2 billion of mortgages financing housing for low- and very-low income families during the two-year transition period in 1993 and 1994. Annualizing, we assign a $1 billion portfolio increase in January 1993 as a result of affordable housing goals.

The Housing and Community Development Act of 1992 also revised Fannie's statutory purpose to read as follows (revisions underlined, emphasis added in bold):

"*SEC. 301. The Congress hereby declares that the purposes of this title are to establish secondary market facilities for residential mortgages, to provide that the operations thereof shall be financed by private capital to the maximum extent feasible, and to authorize such facilities to*

"*(1) provide stability in the secondary market for residential mortgages;*

"(2) respond appropriately to the private capital market;

"(3) provide ongoing assistance to the secondary market for residential mortgages (including activities relating to mortgages on housing for low- and moderate-income families involving a reasonable economic return that may be less than the return earned on other activities) by increasing the liquidity of mortgage investments and improving the distribution of investment capital available for residential mortgage financing;"

"(4) promote access to mortgage credit throughout the Nation (including central cities, rural areas, and underserved areas) by increasing the liquidity of mortgage investments and improving the distribution of investment capital available for residential mortgage financing; and

"(5) manage and liquidate federally owned mortgage portfolios in an orderly manner, with a minimum of

[32]Final regulations regarding the risk-based capital standards were not issued until September 2001 (see below).

[33]The Act defined 'low income' as not in excess of 80% of median income in their local area and 'moderate income' as not in excess of median income.

adverse effect upon the <u>*residential*</u> *mortgage market and minimum loss to the Federal Government.*

Freddie's statutory purpose saw identical amendments. Of particular note, FHEFSSA amended the statement of purpose for Fannie and Freddie to compel them to accept "*a reasonable economic return that may be less than the return earned on other activities*" in promoting affordable housing. This indicated that, in exchange for the special privileges afforded by their unique public charters, profit maximization might have to take a back seat to meeting affordable housing goals. The revision of "*home mortgages*" to "*residential mortgages*" was also indicative of a broader push to promote affordable homeownership via multifamily and condominium residences. The added explicit emphasis on supporting "*central cities, rural areas, and underserved areas*" was a clear nod to redirecting or sustaining mortgage credit toward historically underserved communities.

The Act additionally mandated a number of studies on the effect of fully privatizing Fannie Mae and Freddie Mac, to be drafted by the Comptroller General of the United States, HUD, Treasury, and CBO.

It is quite clear that FIRREA and the ensuing release of Treasury's first report on the GSEs, published May 31, 1990, triggered concerns about tougher capital regulation and preemptive action to increase Fannie's capitalization. In an effort to preempt Treasury's first report, Fannie hired Former Federal Reserve Chairman Paul Volcker to assess its capitalization. Volcker's report, published March 6, 1990, stated that if Fannie followed its own proposed capital adequacy standards "*the Company would be in a position to maintain its solvency in the face of difficulties in the housing markets and an interest rate environment significantly mores adverse than any experienced in the post-World War II period*" and the risk of a public bailout "*would be remote*" (Hagerty (2012), p. 76-77).[34] To meet those standards, Fannie Mae concurrently announced that it would increase its capital stock to roughly $6 billion by the end of 1991, up from $3.7 billion in early 1990, a goal it repeatedly claimed was easily feasible (Welling (1990)). Hagerty (2012) characterized Volcker's report as "*an audacious maneuver—perhaps [Fannie's] most brilliant lobbying coup ever*," as it had the effect easing pressure from Congress to increase FNMA's capitalization. Irrespectively, HUD announced in mid-March that it was ramping up oversight of Fannie and Freddie, appointing six HUD executives to a new oversight board focusing on their "*credit risk, interest rate risk, and capital adequacy*" (The American Banker (3/16/1990)). HUD Undersecretary Dellibovis said the housing agency would postpone a ruling on capital adequacy until the first round of Treasury and GAO reports were completed. A market analyst's report published for Bernstein Research on May 10, 1990 discussed and largely dismissed concerns about capital adequacy impeding earnings per share ahead of the GAO and Treasury reports (Gray (1990)). The research note projected that Fannie would accumulate $2.7 billion in capital over the two years to December 1991—roughly in line with Fannie's pledged increase in capitalization accompanying the Volcker report—with $2 billion from retained earnings net of dividends, $500 million from the expiration of warrants in the spring of 1991, and another $250 million from net reserve additions.

Fannie consistently surpassed its regulatory requirements after the minimum capital thresholds were enacted in 1992 (OFHEO (1998)). In a 1998 report, OFHEO concluded both that Fannie did not meet the 1992 capital requirements before mid-1990 and that Fannie began boosting capital ratios around the time of the May 1990 Treasury report in anticipation of legislative action (OFHEO (1998)). Assessing the impact on asset growth associated with the anticipation of the new requirements is inherently difficult. To arrive at an estimate, we assume perfect foresight about the eventual 1992 regulations. Using the transitional minimum capital requirements under the 1992 Act, OFHEO

[34] Fannie's proposed capital standards were "*nonrecourse credit risk at a ratio of 135-to-1, recourse and collateralized credit risk at 250-to-1, interest-rate risk on on-balance-sheet mortgages at 50-to-1, and credit and interest-rate risk of other on-balance-sheet assets at 50-to-1* (Welling (1990)).

retroactively estimated a capital deficiency of 40% of the transitional minimum requirement in 1989 (OFHEO (1998)). Based on year end 1989 core capital of $3.4 billion, the implied shortfall would have been $2.3 billion ($3.4 billion $\times(\frac{1}{0.6}-1)$ = $2.3 billion) at the end of 1989. Fannie added $500 million in common stock in 1991 through the exercise of warrants issued in the mid-1980s. Assuming 75% of the remaining shortfall was achieved through retained earnings and reserve additions by year end 1991, the residual implied reduction from its $107 billion in mortgage asset holdings is roughly $8.5 billion ($107 billion $\times(\frac{3.4+0.5+0.75\times(2.3-0.5)}{3.4+2.3}-1)$ = $8.5 billion). Using the two-year rule, we assign an annualized $4.25 billion decrease in Fannie's retained portfolio starting in March 1990, based on expectations of new capital regulations, dated to the Volcker report and Fannie's announced recapitalization plan.

Identifying the proper timing for the impact of expected capital regulations is difficult, but it is clear that Fannie was anticipating more stringent capital requirements and actively increasing its capitalization by March 1990 to May 1990. Fannie's share price rose 2.46% on the news of the Volcker report and preemptive capitalization plan on March 6, 1990, a gain of 1.20 percentage points above the S&P 500 for the day. Shares fell 0.69%, for a negative excess return of 1.83 percentage points below the S&P 500, on March 16, the day *The American Banker* reported that HUD was ramping up regulatory oversight of Fannie, particularly with respect to regulatory capital. There was less stock price movement surrounding the release of the Treasury report in late May. We thus identify March 1990 as month that anticipated regulatory capital increases were priced in and began to be acted upon.

The special affordable hosing goals enacted in October 1992 and made effective in January 1993 had also long been anticipated, and had been backed by both Fannie and Freddie in July 1991 (The American Banker (9/23/1991)). The original version of the House-originated Government-Sponsored Enterprises Financial Safety and Soundness Act of 1991 (102 H.R. 2900), introduced July 16, 1991, would have required that Fannie and Freddie develop affordable housing programs (AHPs) funded at no less than 20% of the previous year's dividends payments, with no provision for a lower transitional requirement.[35] Starkly opposed to efforts to amend the bill to instead divert 10% of the Enterprises' annual net earnings to affordable housing, the GSEs were instructed by the House Financial Services to negotiate a mutually agreeable AHP framework with roughly ten housing groups. After weekend negotiations over July 27-28, 1991, Fannie and Freddie promised to purchase $3.5 billion in low-income single- and multifamily housing loans over 1992-1993 (Congressional Quarterly Weekly (8/3/1991)). On July 30, that $3.5 billion AHP commitment was incorporated in a leadership amendment during subcommittee markup (Dow Jones News Service (7/27/1991)). In response to the introduction and early evolution of the GSE oversight bill, Fannie's common shares fell 2.01% on July 16, 1991, for a negative excess return of 1.79 percentage points below the S&P 500 for the day, a skid that extended through the next day of trading. This movement reversed course around the subcommittee markup, with Fannie's shares rising 1.37% on July 30 and 3.82% on July 31, for excess returns of 0.44 percentage points and 3.53 percentage points, respectively.[36]

The final version of H.R. 2900, referred to the Senate Committee on Banking, Housing, and Urban Affairs on September 30, 1991, contained affordable housing goals of $2 billion and $1.5 billion, respectively, for Fannie and Freddie during a two-year transition period starting January 1, 1992, followed by a minimum of 1% of purchases in subsequent years. The bill also included the sense of Congress that the GSEs had "*an affirmative obligation to promote affordable housing for low- and moderate-income families, consistent with the corporation's overall mission*"

[35]According to *The Washington Post*, dividends paid in 1990 would have implied affordable housing funding of $34.6 million from Fannie and $19.4 million for Freddie (The Washington Post (7/27/1991)).

[36]We could not discern wether adoption of the leaders' amendment occurred before or after the closing bell on July 30, 1991.

and required both to develop their own affordable housing goals. When introduced on May 15, 1992, the Federal Housing Enterprises Regulatory Reform Act of 1992 (110 S. 2733) also included the $2 billion and $1.5 billion special affordable housing goals, with the transition period delayed to cover 1993 and 1994. The accompanying Senate committee report argued that the GSEs weren't doing enough to improve homeownership for disadvantaged populations and noted that "*many parties contend that the standardizing and dominant influence of the GSEs has actually hurt the ability of lower-income and non-suburban borrowers to obtain mortgage loans.*" (Senate Committee on Banking, Housing and Urban Affairs (1992), pp. 28-29). Roughly coinciding with the Senate bill being reported on May 15, Fannie announced on May 13 a new "House America" partnership with mortgage originator Countrywide Financial, promising to provide $1.25 billion worth of mortgage financing for low- and moderate- income families over the next 18 months (Reuters (05/14/1992)). Using the two-year rule, we assign an impact of $1 billion to Fannie's affordable housing goals for 1993, but date the news of this policy change to the July 1991 negotiations, rendering the policy as anticipated too far in advance of taking affect to be used as a policy instrument.

The Senate committee report accompanying the Federal Housing Enterprises Financial Safety and Soundness Act stated that the main motive was to "*improve the regulation of government sponsored enterprises,*" and identified FIRREA's mandated studies as the origin of the legislation, further underscoring that the Act was the result of a long and deliberative process (Senate Committee on Banking, Housing and Urban Affairs (1992), pp. 1, 6). The Senate report made no mention of economic stabilization or the current state of the economy as a motivation for either policy change. In his statement upon signing the Housing and Community Development Act of 1992, President Bush emphasized an array of policy changes entirely unrelated to the business cycle, touting that the bill "*establishes a sound regulatory structure for Government-sponsored enterprises (GSEs), combats money laundering, provides essential regulatory relief to financial institutions, authorizes several key Administration housing initiatives, and reduces the risk of lead-based paint poisoning*" (Bush (1992)). The only mention of improving economic performance was related to "*reducing the regulatory burden*" on the banking system.

The bill was enacted during the tail end of the credit crunch persisting from 1990Q1 through 1992Q4. But single-family housing starts and total residential investment rebounded throughout 1992, spurred by a combination of low interest rates, unseasonably warm weather early in the year, and tax reasons (Annual Report of the Federal Reserve Board 1992, pp. 21, 50-51, 75). Mortgage rates had fallen to their lowest levels since the 1970s. Multifamily housing starts continued to drop throughout the year, but the decline was largely attributed to an excess supply of vacant units and depressed rents. Given the forward-looking nature of the bill, its gradual development starting with FIRREA and oversight reports in 1990, political motives related to avoiding a future taxpayer bailout of the GSEs, and that the economy and housing markets had recovered well before the bill's enactment, we classify the Act as unrelated to the business or financial cycle.

HUD Interim Notices on Housing Goals Issued: October 13, 1993; November 30, 1994

On July 22, 1993, HUD proposed interim goals and provided Fannie and Freddie with an opportunity to review and comment. Fannie stated that it would be "hard-pressed" to meet the low-income lending targets, signaling that the company would take a confrontational stance against HUD's tough line on the lending targets and monitoring their performance (The American Banker (8/12/1993)). On October 13, 1993, HUD issued interim housing goals for 1993–1994 that were only slightly revised in response to those comments. The interim goals were not mandatory, but carried a lot of weight in the politically charged environment in which the GSEs were operating (The American Banker

(10/14/1993)). For Fannie, the goals with respect to low- and moderate-income housing remained at 30% of total purchases for 1993 and 1994. For housing located in underserved areas, the goals were set at 28% and 30% for 1993 and 1994, respectively. The special assistance goal remained $2 billion for the 1993-1994 period. For both years, only purchases exceeding the level of business activity supporting households targeted by this goal in 1992 would count toward meeting the $2 billion interim goal. Fannie Mae estimated that it purchased $7.2 billion of mortgages in 1992 that would have qualified toward the special assistance goal had it applied. Fannie's 1993–1994 special assistance goal was then established as twice the 1992 baseline ($14.4 billion) plus the $2 billion interim goal, for a two-year goal of $16.4 billion (58 FR 53048). Thus HUD's interim notices did not necessitate any change from the $2 billion statutory interim housing goal for increased mortgages purchases over 1993 and 1994, as required by FHEFSSA (see above).

On November 30, 1994, HUD temporarily extended the modified housing goals into 1995. The goals were to apply on a pro-rated basis until permanent goals were established later in the year.[37] The annualized goal for special assistance purchases for Fannie Mae was lowered to $4.6 billion in 1995, calculated as half the 1992 baseline plus $1 billion (59 FR 61504). The special assistance goal baseline was lowered out of recognition that the dollar volume of conventional mortgages originated in 1995 was projected to be substantially lower than that originated in 1992. The reduced goal for 1995 was therefore entirely due to changes in mortgage market conditions rather than policy objectives, and thus we do not consider it a significant policy event.

National Homeownership Strategy Released: May 2, 1995

On November 5, 1994, President Clinton called for a national drive to increase the homeownership rate, which had started declining in 1980 and, despite increases in the preceding two years, remained well below its historical peak. He directed HUD to form a partnership with leaders in the housing industry, non-profits, and every level of government to develop a national homeownership strategy. In May 1995, HUD released a report titled "The National Homeownership Strategy: Partners in the American Dream" outlining a detailed plan to add as many as eight million new families to the homeownership rolls by 2000. This goal translated to targeting a national homeownership rate of 67.5%, relative to 64% in 1994. The strategy recommended a series of concerted actions to help middle- and low-income families, racial and ethnic minorities, families with children, and young adults overcome barriers to homeownership (HUD (1995)).

Fannie and Freddie were among the national partners in developing and implementing this strategy, and the report approvingly noted some recent relaxations in the agencies' underwriting standards as well as their efforts to develop automatic underwriting software starting in 1994. The Clinton administration had already been increasing its emphasis on combating discrimination in home mortgage lending, and Fannie and Freddie were coming under more public relations pressure to increase purchases of mortgages for minorities and lower-income families. In particular, a Boston Fed study first circulated in 1992, later published in the *American Economic Review* (Munnell et al. (1996)), had recently documented evidence of systematic discrimination in mortgage lending, based on early data collected as a result of the Home Mortgage Disclosure Act (HMDA) of 1975 (Pub. L. 94-200, enacted December 31, 1975); the paper reverberated throughout the industry and with the GSEs.

HUD Final Rule on Housing Goals Issued: December 1, 1995

In November 1994, HUD temporarily extended the 1994 housing goals for Fannie Mae and Freddie Mac into 1995 (see above), but also drafted more stringent permanent housing goals for subsequent years, which were submitted to OMB

[37] HUD issued final regulations in December 1995 (see below).

for review (The American Banker (12/2/1994)). It was reported that the drafted rules would increase the required share of mortgage purchases meeting the low- and moderate-income goal from 30% to 44% by 1998. The new goals for 1996 through 1999 were formally issued on December 1, 1995. The low- and moderate-income goal was raised from 30% to 40% of the total number of dwelling units financed by mortgage purchases for 1996, and to 42% for 1997–1999. The underserved areas goal was lowered from 30% to 21% of the total number of units for 1996, and to 24% for 1997–1999. The special assistance goal was set at 12% of the total number of units for 1996, and at 14% for 1997–1999. The final rule also included additional subgoals for multifamily mortgages. HUD also announced it would establish annual goals for 2000 and beyond, but pending their issuance, the annual goals for subsequent years would be the same as those for 1997–1999 (60 FR 61846).

Fannie and Freddie had increased their holdings of mortgages for low-income borrowers and underserved areas over 1992–1995. HUD reported that it designed the final goals for the program's early years to be attainable under more adverse conditions than prevailed at the time, but noted that goals would likely become binding constraints as economic conditions change (Treasury (1996), p. 54). Studies by HUD (1996) and Treasury (1996) concluded that Fannie's 1995 performance already exceeded all of the new goals that became effective in 1996. A 1998 GAO report later stated that "*Available evidence from HUD's final housing goal rule indicates that the HUD Secretary generally adopted a conservative approach to setting the final goals in December 1995 for the period 1996 through 1999. This conservative approach placed a high priority on maintaining the enterprises' financial soundness. For example, in 1994 and 1995, HUD and OFHEO conducted research which found that additional mortgage purchases required under the goals were modest and would not materially affect the enterprises' financial condition*" (GAO (1998), p. 8). Based on this evidence, we conclude that the higher goals issued for 1996–1999 did not induce significant changes in Fannie's purchase volume or composition, and thus we do not consider it a binding, significant policy change.

OFHEO Ruling on Off-Balance Sheet Assets Proposed: June 8, 1995

The HCD Act of 1992 granted OFHEO moderate discretion in determining what off-balance sheet assets had a similar credit risk profile as MBS and would also be subject to the 0.45% minimum statutory capital ratio for off-balance sheet assets. OFHEO determined that interest rate and foreign exchange contracts posed a greater risk than MBS, meriting greater capital adequacy ratios. A rule proposed on June 8, 1995 would have required higher capital ratios of 3.0% of the credit equivalent amount of uncollateralized interest rate and foreign exchange rate contracts and 1.5% of the credit equivalent amount of collateralized contracts (60 FR 110). OFHEO amended the Code of Federal Regulations (12 C.F.R. 1750) to include those higher minimum capital requirements on July 8, 1996 (61 FR 131). An OFHEO official stated that the ruling "*in no way implies any significant increase in their capital standards*" and *National Mortgage News* reported that "*it appears the two government-sponsored enterprises already are in compliance*" (National Mortgage News (7/15/1996)). Accordingly, we do not consider it a binding, significant policy change.

New HUD Regulations on Housing Goals Published: October 31, 2000

Policy Change	Agency	Impact	News	Effective	Classification
Affordable Housing Goals	FNMA	+$24.4 billion	July 1999	Jan. 2001	Non-Cyclical

Affordable housing goals come up for renewal in 1999, and HUD had the choice of leaving them unchanged, lowering

them, or raising them. On July 29, 1999, HUD Secretary Cuomo announced a policy of large increases in the goals for 2000-2004, stating that such action would address the nation's housing needs, strengthen the economy, create jobs through home construction, and transform the lives of millions of families (HUD (1999)). The low- and moderate-income goals for Fannie and Freddie would have been increased from 42% to 48% in 2000 and 50% for 2001–2003, requiring the two GSEs to purchase an estimated $488.3 billion in additional affordable housing mortgages over the next decade. A proposed rule reflecting this policy was formally issued by HUD on March 2, 2000 (65 FR 12632).

The final rule, which largely resembled the proposed rule, was issued on October 31, 2000, to take effect January 1, 2001 (65 FR 65044). The low- and moderate-income goal was raised from 42% to 50%, the underserved areas goal was increased from 24% to 31%, and the special assistance goal was raised from 14% to 20% (all as in the proposed rule). The one-year transition period at a lower 48% target for the low- and moderate-income goal was, however, dropped. Absent from the proposed rule, the final rule additionally adopted recommendations from a June 2000 report by HUD and Treasury on predatory lending, with the rule adding more stringent rules and lending guidelines to disallow high cost loans with predatory mortgage lending features from counting toward the AHP goals (HUD (2000)).

The HUD announcement again stated that under the higher goals, Fannie Mae and Freddie Mac would buy an additional $488.3 billion in mortgages that would provide affordable housing for 7 million more low- and moderate-income families over the next decade. Those new mortgages and families were above and beyond the $1.9 trillion in mortgages for 21.1 million families that would have been purchased if HUD's standing goals had been retained (HUD (1999)). Assigning half this amount to Fannie and dividing equally over 10 years yields additional purchases of $24.4 billion annually, as announced in July 1999, and to take effect January 1, 2001.

The elevated affordable housing goals became more difficult to meet during the refinance boom of the early 2000s, though it was later estimated that the net cost of meeting the goals was close to negligible through 2004 for both Fannie and Freddie; while "targeted affordable" loans purchased just to meet the AHP goals had higher expected default rates and charge offs, they also generated greater fee income (FCIC (2011), p. 186). Profitable expansion of multifamily portfolio purchases also helped meet the goals without hurting the GSEs' bottom line, particularly for Freddie Mac. The purchase behavior of Fannie and Freddie was somewhat influenced by the affordable housing goals issued in 2000, although the Financial Crisis Inquiry Commission report noted that "*until HUD set new affordable housing goals for 2005, the GSEs only supplemented their routine purchases with a small volume of loans and non-GSE mortgage-backed securities needed to meet their requirements*" (FCIC (2011), p. 185).

Financial markets appeared to react to new information revealed with both the proposed rule and final rule publication, gradually pricing in the higher affordable housing goals and suggesting that they had been anticipated well ahead of taking effect. News of the proposed rule leaked on July 28, 1999, after HUD announced a scheduled press conference with Secretary Cuomo and Fannie Chairman Barnes the following day.[38] Fannie's share price slid -0.98% on July 28, for a negative excess return of -1.2 percentage points below the S&P 500. When the proposed rule was detailed on March 2, 2000, Fannie's stock price fell 1.78%, for a negative excess return of -1.96 percentage points below the S&P 500. Fannie's share price fell 3.1% upon the announcement of the final rule on October 31, 2000, for a negative excess return of 5.3 percentage points below the return on the S&P 500.

[38]Dow Jones News Service reported: "*HUD plans to raise the level of commitment pledged by Fannie and Freddie to repurchasing home loans initiated by low- and moderate-income families to 48% next year from the current 42% level, according to people familiar with the matter. In addition, the new standards are set to jump to 50% in 2002, the sources said. The new level raises the bar significantly for Fannie and Freddie, though analysts said the higher commitment to such loans is not expected to have a detrimental impact on their operations*" (Dow Jones News Wire (7/28/1999)).

Also suggestive that the ruling had been long anticipated, Fannie, coinciding with the final rule's issuance, unveiled a new My Community Mortgage pilot program on October 31, 2000 for low- and moderate-income borrowers, and pledged to purchase $2 billion in loans with higher-than-usual LTVs and lower down payments, as well as $500 million in mortgages for two- to four-family unit buildings. Given financial markets gradual pricing of the policy change and the overwhelming similarities between HUD's initial policy proposal unveiled 18 months before the final rule took effect, we consider the policy as anticipated too far in advance of taking affect to be used as a policy instrument.

OFHEO Ruling on Capital Requirements Issued: September 13, 2001

OFHEO's development of risk-based capital standards for Fannie and Freddie, pursuant to FHEFSSA, was a slow process. On June 10, 1996, OFHEO published a first notice of proposed rule making outlining the risk-based capital "stress test" being developed, identifying a proposed methodology for calculating the "benchmark loss experience" to be used for determining the GSEs' likely credit losses, and announcing that they intended to use OFHEO's Home Price Index (HPI) in the stress tests (61 FR 29592). In September, OFHEO stated that Fannie Mae and Freddie Mac would probably be required to hold more capital than they currently had on hand, in order to withstand severe economic disturbances (National Mortgage News (9/23/1996)). In June 1997, Fannie boasted that if OFHEO's proposed risk-based capital rule was currently operational, Fannie would have a $1.5 billion surplus over its required capital (National Mortgage News (6/3/1997)).

But reports surfaced in March 1999 that Fannie was actively lobbying for "substantive changes" in the proposed risk-based capital rule under review by OMB (The American Banker (3/2/1999)). *The Washington Post* reported that FNMA would have needed an additional $3.5 billion as of September 30, 1996 to meet the $16.55 billion cushion that would have been required under the proposed rules, and an additional $3.68 billion to meet the $17.73 billion that would have been required if the rules had been in effect on June 30, 1997 (The Washington Post (3/27/1999)). Despite these projected shortfalls, Fannie's shares jumped 6.52%, for a gain of 7.08 percentage points above the daily return on the S&P 500, when they were reported in conjunction with news of the final rule clearing OMB; markets reacted positively to OFHEO's statement that "*relatively inexpensive hedging strategies can dramatically reduce required capital*," while Fannie spokesman Buckley seemed to claim victory in Fannie's lobbying efforts, citing that "*the OMB review process was helpful in improving the rule*," (Dow Jones News Service (3/26/1999)). Following the fierce behind-the-scenes efforts by Fannie Mae officials to substantially alter the proposal, OFHEO officially issued a second proposal fleshing out the rest of the stress test on April 13, 1999 (64 FR 18084).

On December 19, 2000, OFHEO announced that the risk-based capital rule had been completed and was again under review by OMB (The American Banker (12/19/2000)). The final rule was made public in July 2001 and officially published in the Federal Register on September 13, 2001 (66 FR 47730), but enforcement was delayed for one year after publication until September 13, 2002—a full decade after the HCD Act of 1992 mandated the rule's development. The final risk-based capital standard subjected the GSEs to a severe national economic shock that was assumed to last for ten years, required the GSEs to maintain sufficient capital to withstand the shock, and required additional capital for management and operations risk. It also required the GSEs hold more capital if they entered riskier business activities, and reflected a comprehensive view of the risks the GSEs could undertake. An evaluation of the stress test by Stiglitz, Orszag and Orszag (2002) concluded that if Fannie Mae and Freddie Mac could meet the standard, their risk of insolvency was conservatively one in 500,000, though that test might fail to reflect a Great Depression-type scenario.

The final rule was anticipated over a year before taking effect. Moreover, the risk-based capital requirements were consistently and considerably lower than the statutory minimum capital requirements that had already been imposed by FHEFSSA (Frame, Gerardi and Willen (2015)), so we do not consider their imposition to be a binding, significant policy change. In practice, Fannie Mae and Freddie Mac both maintained capital well in excess of the regulatory risk-based capital standard until mid-2008 (Frame, Gerardi and Willen (2015)).

SEC Disclosure Requirements Announced: July 12, 2002

In response to growing fears that the expansion of Fannie and Freddie posed a systemic risk to the economy, a bill was introduced in Congress to curtail the GSEs' privileges and tighten their regulatory oversight. The GSEs' private competitors had been particularly displeased with Fannie's budding expansion into the profitable subprime mortgage market. After HUD released a study in early 2000 reporting that Fannie Mae was discriminating against blacks, the attack from business lobbies and Congress was joined by the Clinton administration. In a March 2000 statement before the House Financial Services Committee, a Treasury official stated that the Treasury Department supported removing Fannie's credit backstop. Fannie took a confrontational approach while ramping up its formidable lobbying efforts.[39] In October 2000, Fannie announced a number of voluntary initiatives to appease their critics, but anti-GSE sentiment continued to build, spurred on by the change in administrations in January 2001. The Bush Administration's Budget for Fiscal Year 2003, published in February 2002, contained an unusual amount of detail on the risks posed by Fannie and Freddie, citing concerns about the growth of their debt outstanding and market perceptions of a government guarantee (The Washington Post (2/6/2002)).

The Enron accounting scandals, which broke into national headlines in October 2001, started tipping the tide of public sentiment against the Enterprises. A bill was introduced in March 2002 that would have revoked the exemptions for Fannie and Freddie from SEC disclosure requirements (The New York Times (7/12/2002)). On April 1, 2002, Freddie Mac and Fannie Mae volunteered new and more in-depth disclosures about their use of derivatives and other risk management practices (The American Banker (4/2/2002)). But following charges of inadequate financial disclosures, OFHEO announced on April 9 that it was launching a comprehensive review of the companies' financial statements, with the assistance of the SEC (The American Banker (4/9/2002)). In an effort to preempt legislative action and fiercer regulatory oversight, Fannie and Freddie "voluntarily" agreed on July 12, 2002 to register their common stock with the SEC and comply with SEC disclosure requirements, including filing audited 10-K annual reports, 10-Q quarterly reports, and 8-Ks (Pitt (2002)). While the agreement was entered voluntarily, it could not be revoked without SEC approval.

New HUD Regulations on Housing Goals Issued: November 1, 2004

Policy Change	Agency	Impact	News	Effective	Classification
Affordable Housing Goals	FNMA	+$7.6 billion	Apr. 2004	Jan. 2005	Non-Cyclical

The GSEs' affordable housing goals again came up for renewal in 2004, the first time under the George W. Bush

[39] Testifying before Congress, Fannie's CEO combatively fired back that "*there is a school of thought that if you harass Fannie Mae, maybe they'll pull their punches... but anybody who knows me knows that would be a very large tactical error. Anyone who thinks that trying to intimidate us would be productive would be making a mistake*" (The American Banker (1/31/2001)).

Administration. On April 5, 2004, HUD sent Congress proposed rules that would have raised the low- and moderate-income goal from 50% in 2004 to 58% by 2008, the underserved goal from 31% to 40% in 2008, and the special assistance goal from 20% to 28% in 2008. In an effort to boost support for first-time homeowners, HUD additionally proposed a new quota that 45% of the single-family, owner-occupied mortgages purchased by Fannie and Freddie in 2005 had to qualify for the low- and moderate-income goal, and to rise to 47% by 2007. A HUD spokesperson said the proposed housing goals would not be made public until the 15-day Congressional review process was complete, but the targets had been reported by *The American Banker* on April 6 (The American Banker (4/7/2004)).

On November 1, 2004, HUD announced the final rule for new housing goals for 2005-2008, which were slightly scaled back from the rules proposed in April (The Wall Street Journal (11/1/2004)). Unlike the previous goals, the new rules provided for increases in the goals for every year between 2005 and 2008. The low- and moderate-income goal was raised to 52% in 2005, 53% for 2006, 55% for 2007, and 56% for 2008 (The American Banker (11/2/2004)). The underserved areas goal was raised to 37% in 2005, 38% for 2006 and 2007, and 39% for 2008. The special assistance goal was raised to 22% in 2005, 23% for 2006, 25% for 2007, and 27% for 2008 (69 FR 63581). The stated purpose of the elevated goals, according to HUD Secretary Jackson, was to "*help the GSEs achieve the standard that Congress intended-leading the mortgage finance industry in helping low- and moderate-income families afford decent housing*" (HUD (2004)).

HUD's aggressive affordable housing goal increases fell under a broader policy umbrella of the administration prioritizing expanding affordable home ownership, particularly for minorities. The President had emphasized using the GSEs to promote minority homeownership in a June 2002 speech: "*Too many American families, too many minorities do not own a home. There is a home ownership gap in America. The difference between Anglo America and African American and Hispanic home ownership is too big... Fannie May and Freddie Mac, as well as the federal home loan banks, will increase their commitment to minority markets by more than $440 billion... This means they will purchase more loans made by banks after Americans, Hispanics and other minorities, which will encourage homeownership. Freddie Mac will launch 25 initiatives to eliminate homeownership barriers*" (Bush (2002)). In signing into law the tellingly titled American Dream Downpayment Act of 2003, President Bush emphasized that "*This administration will constantly strive to promote an ownership society in America. We want more people owning their own home. It is in our national interest that more people own their own home. After all, if you own your own home, you have a vital stake in the future of our country*" (Bush (2003)).

HUD projected that to meet the new housing goals, Fannie and Freddie together would have to purchase an additional 400,000 goal-qualifying home loans during the four-year period 2005-2008, above what they would purchase without the increase in the housing goals (HUD (2004)). The average unpaid principal balance on goal-qualifying mortgages acquired by Fannie in 2003 was $152,000 (HUD (2008), Table 14a-2003). This estimate suggests four-year cumulated additional purchase volume of $60.8 billion ($152,000 $\times$ 400,000 = $61 billion). We appropriate half this amount to Fannie and divided equally over four years, for an annualized increase in purchases of $7.6 billion resulting from the increase in affordable housing goals for 2005–2008.

When the proposed goals were leaked in early April, Fannie's shares fell 1.29% on April 6, 2004, closing 1.08 percentage points below the S&P 500 for the day. Fannie's stock price rose 0.39% on November 1 and 1.45% on November 2 on leaked news of the final rule and its publication in the Federal Register, respectively, closing 0.36 percentage points and 1.44 percentage points above the S&P 500 those days. The final rule's one percentage point reduction across the three goals, relative to the proposed rule, was received positively, although the response to shares

may have been muted by speculation about the imminent presidential election.[40] Given the similarity of the final rule to the proposed rule, and markets' initial pricing of the more aggressive rules, we date the news component of the housing goals as April 2004.

The new affordable housing goals appeared to have noticeably affected both Fannie's purchase behavior and bottom line. According to the Final Report of the Financial Crisis Inquiry Commission, HUD's affordable housing goals predominantly resulted in supplementing routine purchases with small purchases prior to 2004 (see above), but the goals for 2005 onward were considerably more difficult to meet and risked considerably greater carrying losses (FCIC (2011), pp. 186-187). Fannie expanded several initiatives purchasing targeted loans, including its My Community Mortgage program, and loans with lower underwriting standards. Targeted goals loan purchases totaled $18 billion in 2006, or 3.4% of FNMA's $524 billion in single family purchases for the year; these targeted loan purchases were estimated at a holding opportunity cost of $390 million, nearly 10% of FNMA's annual income, and which would rise to roughly $1 billion as the market deteriorated in 2007.

The 2004 Annual Report of the Federal Reserve Board noted that "*the housing market remained robust*" in 2004 despite the end of the refinancing boom, with new and existing home sales reaching record highs and housing starts accelerating from already high levels in 2003; the report noted that demand was "*supported by nominal mortgage interest rates that have remained near their lowest levels since the late 1960s*" (Annual Report of the Federal Reserve Board for 2004, pp. 7, 11-12). McLean (2015) also suggested that the Bush Administration pushed HUD to increase the Enterprises housing goals—a politically motivated move "*to make sure Fannie and Freddie understood who was the boss in the relationship*"—as part of a coordinated effort to rein in the GSEs (McLean (2015), p. 88), precipitated by investigations into Fannie's books and ensuing accounting scandal (see below). Given the long-term objective of promoting homeownership for low- and moderate-income households enshrined by FHEFSSA, reaffirmed by Secretary Jackson's announcement of the new housing goals, we classify HUD's increase for 2005–2008 as principally motivated by political and social policy concerns, and unrelated to cyclical or financial concerns amidst the U.S. housing boom. Given that the rules became effective January 1, 2005, within nine months of the policy being dated to the initial rules' publication, we do not consider the policy change to be anticipated so far in advance as to rule out its use as a narrative instrument.

Accounting Scandal: Capital Shortfall and Surcharge Agreement: September 27, 2004

Policy Change	Agency	Impact	News	Effective	Classification
Capital Surcharge	FNMA	-$141.4 billion	Sep. 2004	Sep. 2004	Non-Cyclical

Allegations of accounting irregularities at Freddie Mac surfaced in 2002, and were subsequently confirmed by the company and an OFHEO investigation in 2003 (see listing below under FHLMC, Sec. 4.2). On July 30, 2003, Fannie's chairman reassured investors at a press conference that its books were clean. Having been embarrassed by Freddie's accounting scandal, OFHEO director Armando Falcon hired Deloitte to undertake an investigation of Fannie and started gathering its own information on Fannie's accounting policies in preparation of a special report (McLean (2015), p.

[40]The following day shares fell 3.74%, 4.86 percentage points below the return on the S&P 500, with the skid was attributed to President Bush winning reelection and Republicans gaining in the House and Senate on November 2nd—election outcomes perceived as increasing the odds of GSE reforms and further diminishing the enterprises' political favor (Reuters (11/3/2004))

85).[41] On March 31, 2004, OFHEO announced that the special examination could prompt a restatement of prior period earnings results. The preliminary report was released on September 22, 2004, and concluded that Fannie had misapplied Generally Accepted Accounting Principles (GAAP) regarding accounting of hedges and the amortization of purchase premiums, discounts on loans, securities, and other deferred charges. Among many irregularities, the report stated that Fannie inappropriately deferred $200 million of estimated amortization expenses incurred in 1998, allowing the company to report earnings per share at exactly the minimum level triggering the largest possible executive bonuses (OFHEO (2004a)). OFHEO's report also trigged an investigation launched by the SEC into Fannie's accounting practices.

On September 27, 2004, OFHEO and Fannie Mae entered into an agreement requiring FNMA to achieve a capital surplus of 30% above its minimal capital requirement by June 30, 2005, in order to provide coverage for uncertainties regarding Fannie's controls and accounting practices (OFHEO (2004b)). The agreement additionally stipulated that until Fannie reached its targeted capital surplus it had to acquire OFHEO's prior written approval before raising its common stock dividends, calling any preferred stock, paying preferred stock dividends above stated contractual rates, or making any payment to repurchase, redeem, or retire any of its shares (OFHEO (2004b)).

The SEC announced on December 15, 2004 that it concurred with OFHEO's ruling, establishing that FNMA would have to restate earnings and prompting Fannie's CEO Franklin D. Raines and CFO Timothy Howard to both step down. On December 21, 2004, OFHEO classified Fannie as 'severely undercapitalized' as of the third quarter of 2004, forcing Fannie to develop and submit a recapitalization plan to OFHEO; the regulator subsequently approved Fannie's capital restoration plan on February 17, 2005. The plan detailed how FNMA would achieve the 30% capital surplus over the minimum capital requirement, coined the 'OFHEO-directed capital requirement,' by a revised target date of September 30, 2005. Fannie Mae would be required to maintain this additional capital buffer until OFHEO's Director determined the requirement should be modified or expire.

The OFHEO report did not quantify the degree of FNMA's capital shortfall, but the *Wall Street Journal* quickly projected that the report implied regulatory capital was likely $4.6 billion below its minimum requirement at the end of 2003 (WSJ (09/27/2004)), and Fannie would face a much large recapitalization if required to increase its capital cushion by 30%, as had recently been required of Freddie in lieu of its own agreement with OFHEO (see listing below under FHLMC, Sec. 4.2); the *Journal* also suggested that Fannie might have to reduce debt and sell some of its $989 billion in assets, primarily MBS (WSJ (09/27/2004)). On November 15, FNMA announced that being required to restate earnings in accordance with GAAP hedging rules would likely result in cumulative losses of $9 billion—the first concrete number for the fallout on Fannie's balance sheet from the scandal (The American Banker (11/16/2004)).[42] Fannie indeed later estimated that the disallowed hedge and other accounting practices would reduce core capital by $9.0 billion as of September 30, 2004 (FNMA 2006 10K Filing Report, p. 19). In determining Fannie's capital shortfall, OFHEO's December 21 announcement that Fannie was being classified as significantly undercapitalized identified the necessary adjustment to core capital at $9.176 billion as of September 30, 2004 (OFHEO (2004c), p. 2).

OFHEO and FNMA estimated that Fannie's capital downwardly revised core capital of $28.856 billion fell $2.981 billion under its minimum capital requirement of $31.837 billion as of September 30, 2004 (OFHEO (2004c), p. 2).

[41] OFHEO had declared Freddie to be financially sound just months before their accounting scandal broke.

[42] According to the *American Banker*, Fannie explained that if it had to adjust hedging treatment dating back to the adoption of Financial Accounting Standard 133 in 2001 "*it would have to cumulatively recognize after-tax losses of roughly $13.5 billion on cash flow hedge relationships that have been deferred, and recognize gains of approximately $4.5 billion on fair value hedges" (The American Banker (11/16/2004)).*

Adjusting for the 30% required capital surplus implies a total capital shortfall of \$12.5 billion as of September 2004, to be eliminated by September 30, 2005 (1.3 $\times$ (\$31.84 billion) - \$28.86 billion = \$12.5 billion). Fannie Mae issued \$5 billion in preferred stock at the end of December 2004, but this was not sufficient for OFHEO to change Fannie's capital classification at year's end 2004 (Mortgage Markets and the Enterprises in 2004, pp. 31–33). Even after the preferred stock issue, the *New York Times* reported that Fannie was estimated to need to raise an additional \$7 billion over the next six months, some of which market analysts' expected to come from diverting some of its \$2 billion to \$3 billion in retained earnings from dividends; and analysts noted that FNMA "*could also sell part of its portfolio holdings to raise additional funds*" (The New York Times (12/30/2004)).

To 'accelerate' rebuilding its capital stock, FNMA announced on January 18, 2005 that it was halving its quarterly dividend from \$0.52 per share to \$0.26 per share in the first quarter of 2005. The dividend cut would reduce quarterly outlays by \$252 million, or \$1.0 billion on an annualized basis, as was reported at the time (The New York Times (1/19/2005)). Interim FNMA Chairman Stephen Ashley cast the move as "*a prudent and responsible action to take as the company moves expeditiously to increase its capital.*" OFHEO Director Armando Falcon Jr. echoed that the dividend cut exemplified Fannie's "*commitment to taking necessary measures to increase the company's capital,*" and OFHEO was to continue reviewing and authorizing each quarterly dividend payment (The Washington Post (1/19/2005)). The OFHEO-FNMA agreement required OFHEO's approval for any dividend increase relative to the prior quarter, suggesting that FNMA's dividend cut would not last merely one quarter. Ex post, FNMA's dividend would not be raised from \$0.26 per share until December 2006 (FNMA 2005 10K, pp. 38, 158).[43]

The company also cancelled plans to build new corporate offices as another measure in Fannie's approved recapitalization plan. Complicating such cost-cutting efforts and the ability to increase capital through retained earnings, however, were accruing expenses related to its multiple ongoing investigations and overhauling its accounting and risk management practices. Fannie would later estimate that costs incurred because of the scandal—covering additional layers, accountants, and fines—totaled \$1.6 billion in 2005 and 2006 (Hagerty (2012), p. 140).

Beyond the preferred stock issue, dividend cut, cost-cutting measures, and increased retained earnings, the capital restoration plan also included "*significantly reducing the size of [FNMA's] investment portfolio, through both normal mortgage liquidations and selected sales of mortgage assets, which reduced the amount of assets in the consolidated balance sheets and thereby reduced our overall minimum capital requirements*" (FNMA 2005 10K, p 158). Market analysts had begun suggesting that Fannie would have to reduce its portfolio to meet the capital surcharge almost immediately after its announcement and the gravity of FNMA's capital shortfall began to be realized. The *Washington Post* reported on September 28 that "*Several analysts said Fannie Mae would probably choose to sell assets or reduce growth, in part because selling stock would require the firm to warn investors that its current financial statements are under review and may have to be restated*" (The Washington Post (9/28/2004)). *National Mortgage News* reported in January that Fannie was "*expected to grow more slowly*" as it recapitalized, and that its November loan purchases indeed suggested as much; Fannie's retained portfolio fell 1.7% from October, with purchases down 15% for the month and 30% from the previous year (National Mortgage News (1/17/2005)). On the other hand, the dividend cut—Fannie's first since 1981—reportedly "*surprised many on Wall Street,*" and was widely interpreted as being forced upon Fannie by OFHEO (The New York Times (1/19/2005)). The *Wall Street Journal*, however, had noted that "*Some analysts had warned that the company might have to cut its dividend*" (The Wall Street Journal (1/19/2005)). The financial press

[43] In practice, FNMA's dividends payments on common and preferred shares fell from \$2.185 billion in 2004 to \$1.376 billion in 2005 (FNMA 2005 10K, p. F-5).

generally seemed to suggest that the dividend cut would not be reversed in the near-term, in part because of OFHEO's involvement and discretion over dividends (The Wall Street Journal (1/19/2005)).

Quantifying the related implications for Fannie's balance sheet is inherently complicated given the sheer magnitude of Fannie's $12.5 billion capital shortfall, short turnaround for its closure, and varying market expectations; the extent to which both dividend cuts and portfolio reductions would be used to rebuild Fannie's capital was the subject of widespread debate and much disagreement. We assume perfect foresight as of the September 27, 2004 OFHEO-FNMA agreement of information revealed over the next four months, notably the magnitude of Fannie's shortfall, Fannie's preferred stock issue, and dividend cut. We also assume that the September 30, 2005 recapitalization deadline imposed by the OFHEO-directed capital requirement agreement was a binding constraint. The preferred stock issuance reduced Fannie's shortfall to $7.5 billion, of which another $750 million would be filled in the year from September 2004 by the dividend cut, which we assume would be maintained until Fannie was recapitalized. Fannie's assets totaled $1.027 trillion as of September 30, 2004 (FNMA 2004 10K, p. F-103). Assuming other cost cutting measures and retained earnings could not have closed more than an additional $1 billion worth of the shortfall, this would imply a portfolio reduction of up to 13.8% ($\frac{28.9+5+0.75+1}{1.3\times 31.8} - 1 = -0.138$), or a portfolio reduction of $141.4 billion, by September 30, 2005. We assign this impact to Fannie's retained mortgage portfolio in September 2004.

Retrospectively, Fannie's 2005 10-K report emphasized that "*mortgage investment activities during 2005 were conducted within the context of our capital restoration plan... The size of our net mortgage portfolio declined 20% during 2005 to $736.5 billion as of December 31, 2005, due to a significant increase in portfolio sales, normal liquidations and fewer portfolio purchases*" (FNMA 2005 10-K, p. 98). The Annual Report of the Federal Reserve Board similarly noted that "*Fannie Mae reduced its mortgage portfolio about 20%*," which "*occurred partly because of regulatory concerns about the adequacy of its capitalization,*" (Annual Report of the Federal Reserve Board for 2005, p. 27). Fannie's total mortgage portfolio fell $179.3 billion, or 19.6%, from $917.2 billion at the close of 2004 to $737.9 billion at the end of 2005 (FNMA 2006 10K, p 121). An OFHEO report also noted that Fannie constrained its retained portfolio activities in 2005, both in order to comply with the capital restoration plan and because addressing its accounting problems limited Fannie's ability to respond to innovations in mortgage markets: "*Fannie Mae, which needed to shrink its assets in order to raise its capital ratios, reduced its retained portfolio purchases to $147 billion in 2005, down 44 percent from 2004*" (Mortgage Markets and the Enterprises in 2005, p. 19). That their lower purchase volume was primarily due to capital deficiencies was further evidenced by the fact that Freddie Mac, during the same year, saw retained portfolio purchases increase 42% to $320.6 billion (Mortgage Markets and the Enterprises in 2005, pp. 19–20).[44]

In May, OFHEO reported that Fannie was "*adequately capitalized*" as of March 31, meaning that its core capital exceeded the minimum capital requirement, and was on track to meet its September 30 deadline for the 30% capital surplus (The Wall Street Journal (5/20/2005)). Fannie's core capital had been increased to $35.0 billion, and its minimum capital requirement had decreased to $30.96 billion, down $880 million since September 30, as a result of portfolio reductions. On November 1, 2005, OFHEO announced that Fannie had indeed succeeded in achieving a 30% surplus over their minimum capital requirement by the September 30, 2005 deadline. Fannie's 2005 10-K cited portfolio reductions as instrumental: "*Lowering our net mortgage portfolio enabled us to achieve our capital objective*" (FNMA 2005 10-K, p. 98).

[44]Fannie's total purchase volume declined 8% to $558 billion in 2005, whereas Freddie's total purchase volume increase 7% to $393 billion (Mortgage Markets and the Enterprises in 2005, pp. 19–20).

The revelations of late September 2004 certainly not been priced into the market before that month, but the financial press quickly caught on to the implications for Fannie's core capital and portfolio. The *Wall Street Journal* scooped the most damning gist of OFHEO's charges against Fannie on September 20, 2004, ahead of a meeting between OFHEO and Fannie executives, citing "*evidence of a pattern of decisions by executives aimed at manipulating earnings to present a smoother performance*" (The Wall Street Journal (9/20/2004)). Fannie released a summary of OFHEO's findings the morning of Wednesday, April 22, and OFHEO's report was made public after markets closed that afternoon. According to the *American Banker*, the *Journal's* preview published September 23 was already adversely affecting Fannie's share price on Monday, September 20 (The American Banker (9/21/2004)). Fannie's common shares fell throughout the week, for a cumulative drop of 15.1%, with the largest declines of -6.56% and -5.01% respectively realized on Wednesday and Thursday (negative excess returns of 5.16 and 4.54 percentage points below the S&P 500, respectively).

The market reaction to Fannie's classification as severely undercapitalized after markets closed on December 21, 2004 was considerably more muted, suggesting that the fallout from the capital surcharge had largely been priced in already. Shares jumped 2.23% on December 22, 2004, rising 1.89 percentage points above the S&P 500 index, seemingly driven by the concurrent news that Raines and Howard, Fannie's top executives, were being forced out—which investors hoped would staunch the regulatory crackdown.

The Annual Report of the Federal Reserve Board portrayed the housing market as quite healthy but not overheated in 2004 (see 'New HUD Regulations on Housing Goals' above), and we found no evidence that concerns about an overheating housing market contributed to OFHEO's reaction. The regulatory backlash of capital surcharges and increased micromanagement of Fannie did, however, follow a trajectory of increased political opposition to the GSEs by the Bush administration and Federal Reserve, which had both been actively proposing to shrink both Fannie and Freddie by legislative or regulatory means.

McLean (2015) described the accounting scandals and OFHEO's investigation into Fannie as a politically exploited turning point against the Enterprises' lobbying clout: "*what had been sporadic, fairly uncoordinated efforts to rein in the GSEs became a concerted push... The Bush administration made common ground with Falcon and began ramping up a push for stronger regulation of Fannie and Freddie*" (McLean (2015), pp. 85-86).[45] As part of the coordinated effort, "*Greenspan, with support from the administration, began to testify about the risks the GSEs, particularly their huge portfolios of mortgages, posed to the financial system*" (McLean (2015), p. 86). For his part, Alan Greenspan stated in his autobiography that an "*effort that began in 2003 to curb the excesses at Fannie Mae and Freddie Mac*" succeeded in convincing President Bush to back the Fed "*through a two-year struggle that resulted in crucial reforms*" around the time of the accounting scandal (Greenspan (2007), p. 242).[46] We thus classify the regulatory changes

[45]Falcon, a Democrat, had been appointed by President Clinton and had previously been more supportive of the GSEs than the Greenspan Fed and parts of the administration. He quickly changed his tune, publicly deriding Fannie as "*a government-sponsored Enron*" (McLean (2015), p. 90).

[46]According to Greenspan: "*The [George W. Bush] administration also took the Fed's advice on policies we thought were essential for the health of the financial markets. Most important was the effort that began in 2003 to curb excesses at Fannie Mae and Freddie Mac, the companies chartered by Congress to help underwrite home mortgages. They are granted a de facto subsidy by financial markets in the form of interest rates with very low credit-risk premiums on their debt—the markets presume Uncle Sam will bail them out in the event of default. Fannie and Freddie had been using this subsidy to pad their profits and grow. But their dealings had begun to distort and endanger the markets and seemed likely to become a bigger and bigger problem. The companies employed skillful lobbyists and had powerful advocates in Congress. President Bush had very little to gain politically by supporting a crackdown. Yet he backed the Fed through a two-year struggle that resulted in crucial reforms*" (Greenspan (2007), p. 242).

arising from FNMA's accounting scandal capital shortfalls as regulatory backlash to an unforeseen event and belong politically motivated to some degree, but certainly unrelated to cyclical or financial concerns.[47]

OFHEO-SEC-Fannie Settlement: Portfolio Caps Agreement: May 23, 2006

Policy Change	Agency	Impact	News	Effective	Classification
Portfolio Limitations	FNMA	-$86.1 billion	May 2006	May 2006	Non-Cyclical

Against the backdrop of the accounting scandals and OFHEO's continued work on its final report investigating Fannie Mae, the Bush administration and Federal Reserve ratcheted up pressure to limit GSE portfolio growth through legislative or regulatory action (The American Banker (2/9/2005)). Testifying before Congress in February and April 2005, Federal Reserve Chairman Alan Greenspan warned that the current size of the mortgage portfolios held by Fannie Mae and Freddie Mac posed a substantial risk to the economy. Greenspan repeatedly proposed limiting each GSE's retained portfolios to somewhere between $100 billion and $200 billion (The American Banker (2/18/2005); The American Banker (4/7/2005)). In April 2005 testimony before the Senate Committee on Banking, Housing and Urban Affairs, Treasury Secretary John Snow echoed the administration's view that some type of limit should be placed on the GSEs retained mortgage portfolios (Department of the Treasury (2005)). In his testimony before Congress, CBO Director Douglas Holtz-Eakin stated that: "*The large mortgage portfolios held by Fannie Mae and Freddie Mac are not necessary for the secondary mortgage market to operate efficiently; those enterprises' issuance of mortgage-backed securities (MBS) can accomplish that outcome*" (CBO (2005)). On May 19, the administration delivered a proposal for tighter regulation of Fannie and Freddie that included portfolio limits (The Washington Post (5/20/2005)). Fannie, however, countered that massive reductions in the portfolios could raise mortgage rates or disrupt the housing market in other ways, and swayed by lobbying efforts, Congress failed to pass GSE regulatory reform legislation. In April 2006, Federal Reserve Chairman Bernanke suggested that the Treasury Department should consider using its power to curb debt issuances of Fannie and Freddie if regulatory reform of the GSEs was not enacted (The American Banker (4/28/2006)).

OFHEO's final investigative report into FNMA's accounting practices, released May 23, 2006, claimed that Fannie had cumulatively overstated earnings by $10.6 billion, and had improperly smoothed earnings over 1998–2004 to increase executive compensation.[48] Concurrent with the report's release, Fannie announced it had agreed to pay a $400 million fine and 'voluntarily' cap its retained portfolio as part of its settlement with OFHEO and the SEC. The accompanying OFHEO consent order retained the mandated 30% capital surplus over Fannie's minimum capital requirement. And the consent order capped Fannie's mortgage portfolio assets at their value as of December 31, 2005, calculated as $727.75 billion according to GAAP standards, until the OFHEO Director determined that modification or expiration of this limitation was merited based on improvements in Fannie's internal controls, accounting practices, and risk management (OFHEO (2006a)). The GAAP accounting calculation was not an apples-to-apples comparison with Fannie's typical measurement of it portfolio based on unpaid principal balance (UPB); the UPB on Fannie's retained

[47] Ex post, the accounting scandal and regulatory backlash appear somewhat overblown and perhaps politically exploited to an even greeter degree. The eventual restatement of Fannie's results for 2002–2004 actually resulted in an increase of shareholder's equity of $4.1 billion, the SEC and Justice Departments both eventually dropped their investigations into Fannie's accounting practices, and a civil suit against ousted Fannie CEO Raines was dismissed (McLean (2015), pp. 90-91).

[48] In December 2006, Fannie Mae released restated financial results for 2002, 2003, and 2004.

mortgage portfolio totaled $736.5 billion as of December 31, 2005 (FNMA 2005 10-K, p. 14). The UPB on Fannie's retained portfolio stood at a lower $721.1 billion as of March 31, 2006, slightly below the cap (Dow Jones Newswires (5/22/2006)).

Nevertheless, the *Financial Times* quoted a stock analyst projecting a small absolute reduction on impact: "*Robert Lacoursiere, Bank of America analyst, said that based on April estimates the cap would require Fannie to trim its holdings by about [$3 billion]. But he said the cap would probably not have a major impact on Fannie's performance or its competitive position*" (The Financial Times (5/24/2005).) To measure the impact of the the portfolio caps, however, we rely on counterfactual portfolio growth in the absence of a cap, driven by FNMA's profit motive. Specifically, we turn to the May 3, 2006 Greenbook forecast of 9.2% and 7.2% growth in mortgage debt for 2006 and 2007, respectively. Applying these growth rates to the $727.75 billion retained portfolio at year's end 2005 suggests portfolio expansions of $67.0 billion for 2006 and $57.2 billion for 2007 if the caps had not been imposed. Annualizing, we assign a reduction of $86.1 billion in May 2006, based on a pro-rated reduction through April 2007 ($67+57.2\times\frac{4}{12}=86.1$).

Financial markets' reaction to the OFHEO consent order was muted, with shares jumping slightly as analysts interpreted the report as putting an end to the OFHEO inquiry, although the SEC and Justice Department investigations remained ongoing (The New York Times (5/24/2005)). Shares responded positively to details of the report leaked a day in advance on May 22, including the allegations of deliberate earnings manipulation and recommendations of limiting Fannie's growth and maintaining the 30% capital surcharge (Dow Jones Newswires (5/22/2006)). Shares of Fannie rose 0.78% on May 22 and 0.90% on May 23, posting excess returns of 1.17 percentage points and 1.33 percentage points, respectively, above the daily performance of S&P 500. This more favorable sentiment reversed on May 24, with shares falling 1.58 percentage points, for a negative excess return of 1.74 percentage points relative to the S&P 500. But much of the fallout had already been priced in; the *New York Times* noted that Fannie's stock was down 28% since the disgraced departure of former CEO Raines in December 2004.

The Annual Report of the Federal Reserve Board portrayed the housing market as having "*cooled substantially*" and noted that decreased residential investment was dragging on overall growth, but suggested that demand was stabilizing after starting to ebb in 2005 (Annual Report of the Federal Reserve Board for 2006, pp. 3, 12). OFHEO's press release unveiling the final investigation of Fannie's accounting practices made no mention of economic or cyclical concerns, but explicitly identified that the portfolio limit was motivated by perceived operational risks: "*Due to Fannie Mae's current operational and internal control deficiencies and other risks, the Enterprise's growth should be limited*" (OFHEO (2006b)). The regulatory backlash against Fannie Mae again followed a trajectory of increased political opposition to the GSEs by the Bush administration and Federal Reserve (see above). We thus classify the portfolio limits imposed after Fannie's accounting scandal as regulatory backlash and politically motivated to some degree, but unrelated to cyclical or financial concerns.

OFHEO Relaxes Portfolio Caps Announced: September 19, 2007

Policy Change	Agency	Impact	News	Effective	Classification
Portfolio Limit Increase	FNMA	+$17.15 billion	Sep. 2007	Sep. 2007	Cyclical

Turmoil erupted in the subprime mortgage market in July 2007, and foreclosure concerns spread regarding ARMs and subprime mortgages resetting at higher rates. In early August 2007, several members of Congress called for easing

the Enterprises' portfolio restrictions as well as increasing conforming loan limits to address problems fomenting in mortgage markets (The American Banker (8/8/2007)).[49] Fannie had requested on August 1 to have its portfolio limit raised by 10%, but OFHEO rejected the request on August 10, citing lingering concerns about the safety and soundness of the housing GSEs, which had still been unable to issue timely, audited financial statements years after accounting scandals exposed weaknesses in their accounting practices and internal controls (The Washington Post (8/11/2007), FNMA 2006 10-K, p. 9). President Bush stated that the portfolio caps on Fannie and Freddie should not be lifted until Congress passed a bill reforming regulation of the GSEs, and Fed Chairman Bernanke asserted that lifting the caps was unnecessary because the GSEs could support the mortgage market with purchases if they sold some of their MBS holdings to the private secondary market (The Washington Post (8/30/2007)).

After repeatedly urging OFHEO to lift the GSEs' portfolio caps, Senator Chuck Schumer threatened to introduce legislation circumventing the administration to increase the GSEs' portfolios (The American Banker (8/17/2007)). In September, a bill was introduced to expand the reach of the GSEs by allowing their mortgage portfolios to grow by 10%, and by raising the conforming loan limit from $417,000 to $625,500. Schumer described the bill as an "*emergency measure*" and both provisions were to be temporary, sunsetting after a year (The American Banker (9/11/2007)). The bill was intended to "*infuse $145 billion into the mortgage market*," with half of that amount earmarked for mortgages refinancing ARMs with rates resting between June 2005 and December 2009.

On September 19, OFHEO announced changes to its methodology for calculating the mortgage portfolio cap in order to provide both Fannie and Freddie greater flexibility in managing market-based fluctuations in an increasingly volatile market. The regulator changed both GSEs' retained portfolio caps from being measured on a marked-to-market basis, as required by GAAP, to the GSE's preferred, less volatile UPB method. OFHEO also adjusted the measurement of retained portfolios from end-of-quarter to a less volatile average of monthly closing values (OFHEO (2007)); the OFHEO press release explained that "*UPB often exceeds the GAAP value for the Enterprises. Due to market fluctuations over the first seven months of 2007, this difference has ranged from $0.1 billion to $9.4 billion*" (Market News International (2007)). The new agreement also loosened Fannie's flat portfolio limit to allow 2% annual growth—not to exceed 0.5% per quarter—from a baseline of $735 billion in UPB at the end of 2007Q3, revised from the previous $727.75 billion portfolio limit based on GAAP measurement. The quarterly growth limit of 0.5% was doubled to 1.0% for the fourth quarter of 2007, to provide even more near-term support to mortgage markets. The binding 2% annual limit would have allowed Fannie a portfolio of up to $749.7 billion in UPB by September 30, 2008. Fannie's Monthly Volume Surveys for August and September 2007 both suggested that their retained portfolio was roughly $4.8 billion higher measured on a UPB basis rather than a GAAP basis (FNMA Monthly Volume Survey August 2007, p. 2, FNMA Monthly Volume Survey September 2007, p. 2). In scoring the policy change, we add this difference to the prior $727.75 billion portfolio limit based on GAAP as a baseline measured in UPB. Assuming the caps were binding constraints, we assign an annualized increase in Fannie's potential purchases of $17.2 billion in the year starting September 2007 $(749.7-(727.75+4.8)=17.2)$.

The portfolio limit modifications were intended to encourage each of the companies to purchase or securitize up to $20 billion each in subprime loans over the next six months, and both GSEs had made commitments to do so (The American Banker (9/20/2007)).[50] The OFHEO press release made it explicitly clear that the policy change

[49]The House had passed a GSE reform bill in May that would have lifted the conforming loan limit 50% in high cost areas, but the bill stalled in the Senate and its future seemed uncertain (The American Banker (8/17/2007)).

[50]Given this 'short run' emphasis on purchasing $20 billion in subprime mortgage securities, we do not invoke the two-year

was motivated by the subprime crisis and rising foreclosure rates: "*With the* ***ongoing concerns about the subprime mortgage market****, both Fannie Mae and Freddie Mac have announced commitments to purchase tens of billions of dollars of subprime mortgages over the next several years... These efforts should assist lenders in helping some subprime borrowers avoid foreclosure*" (OFHEO (2007)).

While OFHEO motivated the action by the need to add liquidity to the subprime market, the response was viewed by many critics as too little, too late. Fannie's share price rose 2.3% on September 19, a gain 1.69 percentage points above that of the S&P 500 for the day. Fannie executives had still been lobbying for a substantially larger 10% increase in their portfolio limitation (The New York Times (9/20/2007)). Given policymakers' focus on aiding the subprime mortgage market and addressing rising foreclosure rates, we classify the portfolio limit modifications as motivated by financial cycle concerns.

Economic Stimulus Act of 2008 (Pub. L. 110-185) Enacted: February 13, 2008

Policy Change	Agency	Impact	News	Effective	Classification
Jumbo Conforming Loan Limit	FNMA	+$41.57 billion	Feb. 2008	Apr. 2008	Cyclical

As the housing crisis worsened, several legislative efforts were floated in 2007 that would have increased the conforming loan limit in high-cost areas. OFHEO warned that such an increase would divert credit from less expensive housing and push the Enterprises deeper into some of the riskiest mortgage markets (The Washington Post (2/8/2008)). As house prices continued to fall, OFHEO announced on November 24, 2007 that conforming loan limits for 2008 would remain at the same levels of 2006 and 2007 (The American Banker (11/28/2007)). By early 2008, the deteriorating economic situation had rapidly become a higher congressional priority than strengthening oversight of the Enterprises. The Economic Stimulus Act of 2008 (ESA), enacted on February 13, 2008, allowed a temporary increase in conforming loan limits for first lien mortgage loans in high-cost areas, dubbed "super-conforming" loans, originated between July 1, 2007 and December 31, 2008. Effective April 1, 2008, the limit for single-family homes increased from $417,000 to the higher of that limit or 125% of the area median home price, but not to exceed $729,750, or 175% of the general limit. The increase did not prove fully effective until May 2008, in part because of issues regarding the pooling and trading of the new class of super-conforming mortgages (Vickery and Wright (2013), Fannie Mae MBSenger April 2008, Vol. 3 No. 2).

We could not find a direct estimate of the impact of ESA's conforming loan limit change for 2008, so we splice together several estimated impacts. Important to the scoring, the super-conforming loan limit was subsequently reduced from the $729,750 maximum set by ESA to $625,500 for 2009, set in motion by the Housing and Economic Recovery Act of 2008 (HERA), as detailed below. Due to data limitations, and assuming the super-conforming loan limit December 31, 2008 sunset would take effect, we assume the policy to be fully operational from April 2008 through December 2008.

An OFHEO document estimated the volume of mortgages that were securitized in 2006 that would have been eligible for Enterprise purchase with the high cost area limits of up to $625,500 at $42.3 billion for the first half of 2007, or $84.6 billion on an annualized basis (OFHEO Mortgage Market Note 08-1, p. 9). Pro-rating this volume for April through December 2008, we assume the agencies could have purchased $63.45 billion worth of super conforming

rule.

loans of between $417,000 and $625,500 in 2008. According to CRS, Fannie and Freddie had securitized 83% of the conventional, conforming loans they could have purchased in 2006 (CRS (2008), p. 4), and we extend that share to assume that 83% of eligible super-conforming loans would have been purchased by Fannie and Freddie. The FHFA also subsequently reported that the Enterprises acquired approximately $30 billion in mortgages in 2010 with loan balances between the $729,750 ESA 2008 limits and the lower limits subsequently set by the Housing and Economic Recovery Act of 2008 (HERA), or roughly 1.77% of the $1.698 trillion total origination volume in 2010 (FHFA Mortgage Market Note 11-01, p. 4).[51] Applying that percentage to 2007 originations of about $2.3 trillion would imply additional purchases for $40.64 billion for all of 2008, or $30.48 billion annualized for the portion of the year starting April 1, 2008 ($2,300 \times \frac{30}{1,698} \times \frac{9}{12} = 30.48$). Combining the two scores suggests a total impact of $83.14 billion for 2008 ($63.45 billion × 0.83 + $30.48 billion = $83.14 billion). As these were all annualized figures applicable to a time-limited policy, we do not invoke the two-year rule, but allocate half this amount, or $41.57 billion, to Fannie for the year starting February 2008, while assigning the remaining half to Freddie Mac (see below).

On January 28, the House had introduced a stimulus bill negotiated with the administration, which included the eventually enacted increase in the conforming loan limits, and the bill was passed in the House the next day. The companion bill introduced in the Senate, however, had no provision for hiking the loan limit. But on February 7, 2008, the Senate passed a version of the bill including the conforming loan limit increase, and the House made it clear that it intended to pass the Senate version. Shares of Fannie increased 6.59% on February 7, closing 5.8 percentage points above the S&P 500 for the day, whereas shares were flat on the day of enactment, compared with a gain of 1.36% for the S&P 500. We date the pertinent timing of the policy to the Senate's February 7 passage of the House version of the bill.

The preamble of the **Emergency** Stimulus Act stated that its purpose was to "***provide economic stimulus*** *through recovery rebates to individuals, incentives for business investment, and an increase in conforming and FHA loan limits*." President George W. Bush's signing statement described the bill as "*a **booster shot for our economy**: a package that is robust, **temporary**, and puts money back into the hands of American workers and businesses. Congress passed a really good piece of legislation, and they did so in a **very expeditious manner**. The bill I'm signing today is large enough to have an impact, amounting to more than $152 billion this year, or about 1 percent of GDP*" (Bush (2008)). Accordingly, we classify the increase in the conforming loan limit as cyclically motivated.

OFHEO Reduces Capital Surcharge Announced: March 19, 2008

Policy Change	Agency	Impact	News	Effective	Classification
Removal of Portfolio Limit	FNMA	+$9.28 billion	Feb. 2008	Mar. 2008	Non-Cyclical
Reduced Capital Surcharge	FNMA	+$53.33 billion	Mar. 2008	Mar. 2008	Cyclical

On February 27, 2008, OFHEO announced that the caps on the Enterprises' portfolios were being removed effective March 1, 2008; Fannie and Freddie had begun filing timely financial reports again, for the first time since the accounting scandals, which largely motivated the change (The New York Times (2/28/2008)). OFHEO also noted substantial progress made by both GSEs in reforming and improving internal systems and controls. Citing recent losses and

[51] The FHFA was created by HERA to replace OFHEO as the housing GSE's regulator (see below).

market conditions, however, OFHEO initially retained the 30% capital surplus above the statutory minimum capital requirement, but noted that it would discuss phasing out the capital surcharges as their consent orders approached being lifted. Regarding the decision not to remove the capital surcharges, OFHEO Director Lockhart stated "*We have to be very careful in this market not to do too much... This capital has served them extremely well over the last nine months*" (The New York Times (2/28/2008)).

The removal of the caps quickly escalated pressure from Congress, particularly Senator Schumer, to also immediately remove the Enterprises capital surcharges. The financial crisis also escalated considerably immediately following OFHEO's removal of the portfolio limits. Rumors had surfaced in early March that Bear Stearns was in trouble, precipitating a market selloff; after a first failed attempt to provide a federal lifeline to the investment bank, the Fed arranged a fire-sale takeover over by JP Morgan Chase over the weekend of March 16-17 (Johnson and Kwak (2010), pp. 158-159).[52] Along with announcing its approval of the financing arrangement for JP Morgan's acquisition on March 16, 2008, the Fed also announced two new policy moves to provide increased liquidity.[53]

On March 19, OFHEO, Fannie, and Freddie jointly announced an "initiative to increase mortgage market liquidity" (OFHEO (2008)). As part of the initiative, the capital surcharge was reduced from 30% to 20% of the minimal capital requirement, effective immediately. And as part of a deal, Fannie and Freddie promised to raise additional capital and buy more mortgage securities to calm financial markets. The plan effectively reduced Fannie's capital requirement from $41.5 billion to $38.3 billion, or a reduction of $3.2 billion (The Washington Post (3/20/2008)). Made possible by the earlier removal of the portfolio caps, OFHEO estimated that the combined reduction of required capital of about $5.9 billion would allow Fannie and Freddie to immediately add up to $200 billion worth of MBS to their portfolio (OFHEO (2008)). OFHEO Director James Lockhart stressed that "*both companies have prudent cushions above the OFHEO-directed capital requirements and have increased their reserves. We believe they can play an even more positive role in* ***providing the stability and liquidity the markets need right now***" (OFHEO (2008)).

OFHEO's projected $200 billion impact on the Enterprises' holdings is consistent with the release of a combined $5.9 billion in capital leveraged at the 3% minimum capital requirement. For FNMA, the release of $3.2 billion in capital would thus expand their potential retained portfolio by $106.7 billion $\left(\frac{\$3.2}{0.03} = \$106.7\right)$. Using the two-year rule, we assign an annualized impact of $53.33 billion for FNMA's retained portfolio for the year starting March 2008 resulting from the capital surcharge reduction.

To assess the impact of the removal of the portfolio limits, we rely on the January 23, 2008 Greenbook forecasts of 3.1% and 3.0% growth in mortgage debt for 2008 and 2009, respectively. Applying this growth rate to a retained portfolio of $727.75 billion at year end 2007 suggests a projected increase for 2008 and 2009 of respectively $8 billion and $15.7 billion in mortgage assets in excess of the permitted 2% growth permitted before the removal of the portfolio limits. Pro-rating growth between the two years, we assign a potential annualized increase in Fannie's retained portfolio of $9.28 billion in the year starting March 2008 from the portfolio cap's removal $\left(\$8.0 \times \frac{10}{12} + \$15.7 \times \frac{2}{12} = \$9.28\right)$. A fund manager, however, suggested that in the deteriorating mortgage market conditions the remaining capital surcharges were much more of an impediment to portfolio growth than the portfolio caps: "*Given the losses that the agencies are taking, the binding constraint to the growth of the portfolio is not the Ofheo caps but the regulatory capital*" (The Financial Times (2/28/2008)).

[52] As an investment bank, Bear Stearns was, at the time, ineligible for direct loans from the Federal Reserve.

[53] These included a Primary Dealer Credit Facility to allow investment banks to borrow directly from the Fed for the first time, and a 25 basis point reduction in the primary credit rate (Federal Reserve Press Release March 16, 2008).

On the announcement of the caps' removal, shares of Fannie jumped in mid-day trading on February 27, initially gaining up to 17%; shares closed up 1.17% for the day, or 1.2 percentage points above the daily return on the S&P 500, as markets priced in both OFHEO's move and worse-than-expected fourth quarter losses also announced that day (Dow Jones Newswires (2/27/2008)). Fannie's stock soared on March 18, 2008, a day ahead of the announced relaxation, as OFHEO announced a press conference for the following day and the *Wall Street Journal* reported that the regulator was "*close to reducing—but not eliminating—an excess-capital requirement*" (The Wall Street Journal (3/18/2008)). Later in the day *Reuters* reported that "*a source familiar with the deal said the companies would be granted on the order of $200 billion in new mortgage-buying power, which amounts to a one-third reduction in their excess capital*" (Reuters (3/18/2008)). Shares rose 27.06% on March 18, gaining 22.82 percentage points more than the S&P 500, and another 8.82% on March 19, 11.25 percentage points above the daily return on the S&P 500.

The decision to remove the Enterprises portfolio caps was announced "*just hours after Fannie Mae was able to successfully file its 2007 financial statements on time*" and Freddie was expected to report its 2007 on time later that day (The Wall Street Journal (2/28/2008)). Lifting the caps was framed by the *Financial Times* as giving "*a green light to expand their loan portfolios yesterday amid mounting evidence that the US housing slump is deepening*" (The Financial Times (2/28/2008)), but we could find no direct evidence that the caps were tied to market conditions rather than the Enterprises' timely filings. Moreover, OFHEO was making good on a September 2007 commitment "*to give the Enterprises more flexibility to increase their portfolios, in line with the agreements, when they produced timely financial reports*" (OFHEO Annual Report 2008, p. 63). Consequently, we classify the removal of the portfolio caps as principally motivated by regulatory commitment and not cyclically motivated.

OFHEO's press release regarding the capital surcharge reduction stressed that the move was "*expected to provide up to $200 billion of* ***immediate liquidity to the mortgage-backed securities market***" (OFHEO (2008)). The reduction of the capital surcharge from 30% to 20% of minimum capital requirement was specifically attributed to a mix of "*[reporting and control compliance] progress, the* ***public purpose*** *of the two companies, and* ***ongoing market conditions***." We thus classify the reduction of capital surcharges as cyclically motivated.

Provisional Fed Lending to Fannie and Freddie Announced: July 13, 2008

On July 13, 2008, the Federal Reserve Board of Governors authorized provisional lending to Fannie and Freddie if such lending proved necessary. The move was intended to supplement the Treasury Department's statutory lending authority and to "*promote the availability of home mortgage credit during a period of stews in financial markets*" (Annual Report of the Federal Reserve for 2008, pp. 216-217). No lending was made under this authorization before the Enterprises were taken into government conservatorship on September 7, 2008 (see below).

OFHEO Reduces Capital Surcharge Announced: May 19, 2008

Policy Change	Agency	Impact	News	Effective	Classification
Reduced Capital Surcharge	FNMA	+$17.75 billion	May 2008	May 2008	Cyclical

On May 6, 2008, Fannie announced a plan to raise $6 billion in capital, including a common stock offer. Fannie also announced that it planned to cut its third quarter dividend from 35 cents to 25 cents. OFHEO concurrently informed

Fannie that it had lifted the May 2006 Consent Order, effective immediately, and would reduce the standing OFHEO-directed capital surplus requirement from 20% to 15% above Fannie's statutory minimum capital requirement when the capitalization plan was successful completed. OFHEO also informed Fannie that it intended to reduce the capital surcharge by an additional 5 percentage points by September 2008, provided Fannie could maintain excess capital well above OFHEO's regulatory requirement (Fannie Mae Offering Circular, May 8, 2008).

Fannie CEO Mudd said said the extra capital would be used to "*shore up its financial strength, 'pursue the best business opportunities we have seen" and help the housing market recover*" (The Washington Post (5/7/2008)). Mudd added that Fannie was "*being asked to play a broader role in the future of U.S. housing.*"

On May 19, 2008, OFHEO announced that Fannie's capital surcharge was being reduced from 20% to 15% above the statutory minimum capital requirement. Based on the statutory minimum capital requirement of $31.335 billion as of March 31, 2008, the 5 percentage point reduction in the capital surcharge would have freed up $1.57 billion in working capital, effective immediately. FHFA reported that Fannie's core capital had been $42.676 billion at the end of March (FHFA (2008a)). The *Washington Post* reported that "*Each dollar of additional capital it raises would enable it to increase its mortgage holdings by about $35 or expand its mortgage guarantees by about $193, according to OFHEO*" (The Washington Post (5/7/2008)). Fannie's retained mortgage portfolio totaled $726.7 billion and its guaranteed MBS held by third parties totaled $2,201.0 billion as of March 31, 2008 (FNMA 10-Q, March 31, 2008, p. 3), suggesting that these volumes were supported by roughly $20.8 billion and $11.4 billion in capital, respectively. In keeping with this split, we assume 64.8% of the released capital would have been allocated to retained portfolio expansion as opposed to its MBS guarantee book, allowing a possible expansion of up to $35.6 billion from the 5 percentage point capital surcharge reduction $\left(1.57 \times \frac{20.8}{20.8+11.4} \times 35 = \$35.5\right)$. Using the two-year rule, we assign a potential annualized increase to Fannie's retained portfolio of $17.75 billion for the year starting May 2008.

The *Financial Times* framed the regulatory change as Fannie having "*received permission from its regulator to expand its activities amidst the global credit squeeze*" (Financial Times (5/7/2008)). OFHEO's announcement that the con set order was being lifted and portfolio surcharges eased appear unanticipated; after falling more than 7% in morning trading on the news of a $2.2 billion first quarter loss, shares rebounded to gain 7.1% by the afternoon "*as investors focused their attention on the concession that Fannie won from the Office of Federal Housing Enterprise Oversight*" (Financial Times (5/7/2008)).

According to the *Financial Times*, "*Members of Congress [had] called for the surplus capital requirement to be lowered or eliminated so that Fannie and Freddie can buy more mortgages and* ***help stabilise the market***" (Financial Times (5/7/2008)). Given policymakers' stated objective, the similarities between OFHEO's March and May capital surcharge reductions, and the prevailing economic context, we also classify the May reduction as cyclically motivated.

Housing and Economic Recovery Act of 2008 (Pub. L 110-289) Enacted: July 30, 2008

Policy Change	Agency	Impact	News	Effective	Classification
Jumbo Conforming Loan Limit	FNMA	-$13.34 billion	July 2008	Jan. 2009	Cyclical

The omnibus housing bill overhauled regulatory oversight of the GSEs and the FHA mortgage insurance program, and enacted an array of other housing-related provisions including a first-time homebuyer credit, an expanded low-income-housing tax credit, and a HOPE for Homeowners program for the FHA to insure up to $300 billion worth of

newly refinanced mortgages through FY2011 (CQ (2009)). With regard to the GSEs, the Act ordered the dissolution of OFHEO, FHFB, and HUD's GSE mission team and consolidation of their responsibilities into a new independent agency, the Federal Housing Finance Agency (FHFA) tasked with regulating Fannie, Freddie, and the FHLBanks. The FHFA was granted more power to set capital requirements than OFHEO had been, and was newly authorized to take the GSEs into conservatorship or receivership if either were classified as 'critically undercapitalized,' with a large amount of discretion to determine whether that was necessary. The Act also legislated that HUD's annual housing goals for 2008 would remain in effect for 2009 and thereafter, until the FHFA adjusted the goals.

HERA also temporarily authorized the Treasury to make unlimited capital and debt investments in Fannie and Freddie, up until a December 31, 2009 sunset. The Act also increased the statutory debt ceiling from $9.8 billion to $10.6 trillion, which *Congressional Quarterly* characterized as intense to "*set the limit for Treasury's purchase of stock*" (CQ (2009)).

The Act set a structure for conforming loan limits for the nation as a whole, as well as for high-cost areas, which would be annually indexed based on a home price indexed chosen and maintained by the FHFA director. The Act amended the FNMA Charter Act to set the national conforming loan limit at $417,000 and increase the conforming loan limit for high cost areas, defined as areas in which 115% of the median home price exceed the national conforming loan limit, setting super-conforming loan limits to the lesser of 115% of the area median home price or 150% of the conforming loan limit. The changes were effective December 31, 2008, when the ESA super-conforming loan limit expired. The Act also established that the conforming loan limit would be changed, effective January 1 of each year, by the percentage change in the FHFA's preferred home price index over a preceding 12-month period; and if the home price index was falling, no downward adjustment would be made.

On November 7, 2008, FHFA announced that the single family home conforming loan limit for most areas of the country would be kept at $417,000 for 2009, thus setting the super-conforming loan limit to 115% of the area median home price, but not to $625,500 (FHFA (2008b)). The lower super-conforming loan limit authorized as a result of HERA took effect on January 1, 2009, a decrease from the $729,750 maximum set by ESA for 2008. Because home price indices were declining, it should have been no surprise that the statutory indexation floor set by HERA would bind instead of the FHFA announcing a higher conforming loan limit for 2009.

As noted above, FHFA subsequently reported that the Enterprises acquired approximately $30 billion in mortgages in 2010 with loan balances between the $729,750 ESA 2008 limits and the lower limits subsequently set in accordance with HERA, or roughly 1.8% of the $1.698 trillion total origination volume in 2010 (FHFA Mortgage Market Note 11-01, p. 4). Applying that percentage to 2008 originations of about $1.51 trillion yields roughly $26.68 billion in originations between the two conforming loan limits ($\frac{30}{1,698} \times 1,510 = 26.68$). As these were all annualized figures applicable to a time-limited policy, we do not invoke the two-year rule, but allocate half this potential portfolio decrease, or $13.34 billion, to Fannie for the year starting July 2008, when the structure of the new conforming loan limit formula was established by HERA. We assign the remaining half to Freddie Mac (see below).

Senators Chris Dodd and Richard Shelby, the Chairman and Ranking Member of the Senate Committee on Banking, Housing and Urban Affairs issued the following statement upon the bills enactment: "*Today marks an important change in the federal government's response to the economic strain being felt by millions of Americans across the country and our financial markets. This is the most sweeping housing legislation since the Great Depression, representing a turning point in our country's* ***commitment to economic growth*** *and affordable housing, and* ***providing relief to homeowners*** *and communities across the country. I congratulate the President for signing it, and I am com-*

mitted to ensuring that this law is implemented effectively and expeditiously, and that it fulfills its promise to ***prevent foreclosures, restore home values, stabilize our housing markets, and create economic growth***" (Senate Committee on Banking, Housing and Urban Affairs (2008)). Given this characterization and the bill's extensive provisions aimed at increasing home purchases and refinancing activity, and mitigating foreclosures, we classify the Housing and **Economic Recovery** Act of as clearly cyclically motivated.

FHFA Conservatorship Announced: September 7, 2008

Policy Change	Agency	Impact	News	Effective	Classification
Portfolio Limit Increase	FNMA	+$67.5 billion	Sep. 2008	Sep. 2008	Cyclical

As their losses and capital position worsened, concerns about a possible government takeover of Fannie and Freddie increased markedly in July 2008; the two Enterprises had posted cumulative losses exceeding $11 billion for operations spanning July 2007 through March 2008. The *Wall Street Journal* reported on July 10 that the Bush administration had been holding increasingly serious talks about contingency plans for the agencies faltering, prompting a heavy market selloff; shares of Fannie and Freddie fell 13% and 24%, respectively, to both close at their lowest values since 1992 (The Wall Street Journal (7/10/2008)). Treasury Secretary Hank Paulson's attempts to calm investors' concerns that common shareholders would be wiped out if either company were taken into receivership—"*suggesting that no government takeover of Fannie and Freddie was imminent*"—backfired, and the shares of Fannie and Freddie closed the week down roughly 30% and 45%, respectively (The New York Times (7/12/2008)). Concerns about a bailout and wild swings in the GSEs' share prices spilled over into one of the most volatile days of trading since the collapse of Bear Stearns in March 2008. On July 14, the Federal Reserve announced that it would grant Fannie and Freddie access to its discount window, while the Treasury announced its intention to seek legislation expanding the GSEs' statutory credit lines with the Treasury Department. HERA, enacted July 30, 2008, temporarily authorized unlimited purchases of the Enterprises' securities through 2009 (see above).

In early September, reports started to leak that an imminent rescue deal was expected to involve placing Fannie and Freddie in conservatorship of the FHFA (The Wall Street Journal (9/6/2008), The New York Times (9/6/2008)). On September 7, one week before Lehman's failure, the Treasury and FHFA announced that Fannie and Freddie were being placed in government conservatorship; the Enterprises had collectively posted losses exceeding $14 billion in the preceding four quarters. In conjunction with the conservatorship, the Treasury announced it was providing two facilities to support the Enterprises.[54] A Government Sponsored Enterprise Credit Facility was made available to provide liquidity through short-term loans collateralized by agency MBS, as needed, until December 31, 2009. And a Senior Preferred Stock Purchase Agreement (SPSPA) was entered with each Enterprise ensuring they would have positive net worth for a considerable time. Under its SPSPA, Treasury agreed to provide Fannie with up to $100 billion in capital in exchange for senior preferred stock and warrants representing an 79.9% ownership stake; 80% ownership would have legally triggered having to carry the Enterprises' obligations on the federal government's balance sheet, which the administration was keen to avoid. The Treasury Department received an initial $1 billion in senior preferred stock from each Enterprise, which carried a mandatory 10% annual dividend to be paid quarterly. And if the FHFA

[54]In addition, the Treasury initiated a temporary agency MBS purchase program (see listing below under U.S. Treasury Department, Sec. 4.5).

determined that either Enterprise's liabilities exceeded its assets, as measured by GAAP, the Treasury would provide capital making up the difference, and an equal amount would be added to the Treasury's senior preferred stock holdings, again carrying a 10% dividend rate. The SPSPA contracts were indefinite in duration, until amended or removed by mutual agreement.

As part of the SPSPA, Fannie's retained mortgage and MBS portfolio was capped at $850 billion as of December 31, 2009, with this limit subsequently to be reduced by 10% each year until reaching $250 billion in 2021. We do not attempt to estimate the counterfactual evolution of the mortgage portfolio in the absence of the SPSPA agreement and simply measure the impact relative to the portfolio outstanding on August 30, 2008. On that date, the total retained portfolio was approximately $760 billion, implying a maximum increase of $90 billion by the end of 2009, or an annualized $67.5 billion increase $\left(\$90 \times \frac{12}{16} = \$67.5\right)$, which we assign to September 2008. Both Fannie and Freddie were allowed to grow their MBS guarantee books without limits and without capital constraints. In his September 7 statement announcing and detailing the move to conservatorship, FHFA Director Lockhart explained that "*the Enterprises will be allowed to grow their guarantee MBS books without limits and continue to "**purchase replacement securities for their portfolios, about $20 billion per month without capital constraints***" (FHFA (2008c)). We thus do not consider the release of working capital from eliminating the remaining capital surcharge to be a potentially binding constraint, as with the May 19, 2008 reduction (see above). [55]

FHFA subsequently announced on October 10 that the capital classifications of Fannie Mae and Freddie Mac were being suspended and none the regulatory capital requirements would be considered binding during the conservatorship (FHFA (2008a)). FNMA's 2008 10-K stated an "*intention to hold the majority of our mortgage assets to maturity to realize the contractual cash flows*" (FNMA 10-K, p. 43), further suggesting that portfolio purchases pursuant to the agreement would expand their balance sheet. Within two weeks of entering conservatorship, "*Fannie and Freddie were told to ramp up their mortgage bond purchases as the financial crisis deepened and credit activity came to near standstill*" and the financial press began reporting in October that federal regulators were ordering each Enterprise to purchase at least $20 billion in mortgage securities each month, of "*mostly subprime, Alt-A and non-performing prime mortgage securities*" (MarketWatch (10/11/2008)).

The Treasury Department's language also strongly suggested that the GSE's were being compelled to increase their mortgage holdings before the portfolio limit began to ratchet down. In a press statement, Treasury Secretary Paulson explained "*the primary mission of these enterprises now will be to **proactively work to increase the availability of mortgage finance***," elaborating that in order "*to **promote stability in the secondary mortgage market** and lower the cost of funding, **the GSEs will modestly increase their MBS portfolios through the end of 2009**. Then, to address systemic risk, in 2010 their portfolios will begin to be gradually reduced at the rate of 10 percent per year, largely through natural run off, eventually stabilizing at a lower, less risky size*" (Department of the Treasury (2008a)). Paulson acknowledged that "*During this ongoing housing correction, the GSE portfolios have been constrained, both by their own capital situation and by regulatory efforts to address systemic risk,*" noting that mortgages spreads had widened, but explained that "*the **GSEs are expected to moderately increase the size of their portfolios over the next 15 months through prudent mortgage purchases***" (Department of the Treasury (2008a)). The easing of regulatory efforts to address systemic risk—the capital surcharges and removal of capitalization classifications—were clearly intended to enable retained portfolio growth. The *Washington Post* reported that government officials reported the

[55] Based on the statutory minimum capital requirement of $32.63 billion as of June 30, 2008, the elimination of the remaining 15% capital surcharge would have freed up $4.89 billion in working capital, effective immediately (FHFA (2008a)).

Enterprises would "*expand their lending programs to make mortgages available to more borrowers*," with one speaking on the condition of anonymity explaining "*The companies were starting to contract, and that was not very useful... They were having trouble fulfilling this mission*" (The Washington Post (9/9/2008)). We thus considerer the FHFA conservatorship to be a binding political constraint forcing balance sheet expansion.

In a statement, President Bush emphasized that "*Putting these companies on sound financial footing and reforming their business practices is* ***critical to the health of our financial system and to making further progress with the housing correction that today is weighing heavily on our economy.*** *Allowing the companies to fail or further deteriorate would damage our home mortgage market and could weaken other credit markets that are unrelated directly to housing. Americans should be confident that the actions taken today will strengthen our ability to weather the housing correction and are critical to* ***returning the economy to stronger sustained growth***" (Bush (2008)).

The announcement of conservatorship wiped out nearly all remaining stockholder equity, with shares having already fallen 88.8% in the year to September 5, 2008. When markets reopened on Monday, September 8, shares of Fannie collapsed 89.6%, to 73 cents, from previously closing at $7.04 per share. The possibility of conservatorship clearly had not been fully priced into Fannie's shares. Hereafter we largely cease reporting information about Fannie's share price, as its movements became highly volatile and rather uninformative after falling to penny stock status.

Given the prevailing economic contact and the justifications and characterizations of Secretary Paulson and President Bush, we classify taking Fannie and Freddie into conservatorship as clearly cyclically motivated. Less than one month later, the Emergency Economic Stabilization Act of 2008 (Pub. L. 110-343, enacted October 3, 2008) authorized a $700 billion Troubled Asset Relief Program (TARP) fund to be used by the Treasury Department to bolster the U.S. financial system.

American Recovery and Reinvestment Act of 2009 (Pub. L. 111-5) Enacted: February 17, 2009

Policy Change	Agency	Impact	News	Effective	Classification
Jumbo Conforming Loan Limit	FNMA	+$13.34 billion	Feb. 2009	Feb. 2009	Cyclical

Shortly after the FHFA announced the super-conforming loan limit was being reduced for 2009 pursuant to HERA, Congress intervened to statutorily set a higher super-conforming loan limit. On February 17, 2009, the American Recovery and Reinvestment Act of 2009 (ARRA) re-established the temporary $729,750 maximum super-conforming loan limit for mortgages originated during calendar year 2009, which had lapsed at the end of 2008 (see above). Commonly referred to as the Recovery Act, ARRA was a package of deficit financed tax cuts, transfers to state and local governments, increased unemployment benefits and safety net spending, and infrastructure spending; it was the largest fiscal stimulus bill enacted to combat the Great Recession, estimated at the time to cost $787 billion by the CBO.[56]

The sunset of the higher super-conforming loan limit reestablished by ARRA was twice subsequently extended. On October 30, 2009, the Department of Interior, Environment, and Related Agencies Appropriations Act of 2010 (Pub. L. 111-88) extended the temporary $729,750 maximum super-conforming loan limit for mortgages originated through the end of calendar year 2010. The Treasury Secretary and HUD Secretary had both been calling on Congress to

[56] ARRA's price tag was subsequently revised to $840 billion (CBO (2015))

renew the elevated super-conforming loan limit as part of a broader initiative to support the housing market, including a temporary extension of the first-time homebuyer tax credit (The American Banker (10/30/2009)). Industry trade groups had also been lobbying, rather successfully, for an extension well ahead of its expiration, citing that uncertainty about its extension was making it harder to originate loans with balances above $625,500 (National Mortgage News (11/2/2009)). On September 30, 2010, the Continuing Appropriations Act of 2011 (Pub. L. 111-242) again extended the temporary $729,750 maximum limit for mortgages originated through the end of fiscal year 2011 (September 30, 2011), after which the temporary statutory limits expired and the permanent limits under HERA again become binding.

We again estimate that roughly $27.2 billion in originations would have been purchased between the two super-conforming loan limits in 2009 (see HERA above), and allocate half this potential increase in retained portfolio purchases and MBS activity to Fannie for one year starting in February 2009. We consider the two subsequent extensions to reflect a continuation of current policy during the Great Recession and its immediate aftermath, assigning no impact.

The preamble of ARRA stated that its purpose was "*Making supplemental appropriations for job preservation and creation, infrastructure investment, energy efficiency and science, assistance to the unemployed, and State and local fiscal stabilization*." Upon signing the bill into law, President Obama offered the following characterization of the stimulus package and the economic context motivating it: "*The Act provides a* ***direct fiscal boost to help lift our Nation from the greatest economic crisis in our lifetimes and lay the foundation for further growth****. This recovery plan will help to* ***save or create as many as three to four million jobs*** *by the end of 2010, the vast majority of them in the private sector... The situation we face could not be more serious. We have inherited an* ***economic crisis as deep and as dire as any since the Great Depression***" (Obama (2009)). The bill was introduced in the House in late January, considered in the Senate in early February, and passed and enacted within three weeks of being introduced. We classify ARRA and the increased super-conforming loan limit as clearly cyclically motivated.

Homeowner Affordability and Stability Plan Announced: February 18, 2009

Policy Change	Agency	Impact	News	Effective	Classification
Portfolio Limit Increase	FNMA	+$50.0 billion	Feb. 2009	May 2009	Cyclical

On February 18, 2009, President Obama announced the Homeowner Affordability and Stability Plan, a set of new initiatives and $75 billion in funding to support the housing and mortgage markets.[57] The first two prongs of the housing initiative were mortgage refinancing programs: assisting refinancing by non-delinquent homeowners with conforming loans owned or guaranteed by Fannie and Freddie (the Home Affordability Refinance Program, or HARP) and helping homeowners with documented hardship via write-down modifications to their existing mortgages (the Home Affordability Modification Program). The third and final prong was to "*support low mortgage rates by strengthening confidence in Fannie Mae and Freddie Mac*" (Department of the Treasury (2009a)). The Treasury Department press release also noted that purchases under their agency MBS program would continue in conjunction with the Homeowner Affordability and Stability Plan (see listing below under Treasury, Sec. 4.5). The HARP program was intended to help 4- to- 5 million homeowners refinance mortgages guaranteed by Fannie or Freddie, in part by removing the restriction that the Enterprises couldn't refinance mortgages valued at more than 80% of the home's worth, thus granting "under-

[57] The Homeowner Affordability and Stability Plan would also come to be known as the Making Home Affordable Plan.

water" homeowners access to cheaper refinancing rates (Obama (2009)). The loan modification program was to be financed with up to $50 billion in TARP funds and another $25 billion from the Enterprises.

As part of the plan, Fannie's mortgage portfolio cap would be revised upward to allow a maximum retained portfolio of $900 billion as of December 31, 2009, up from the $850 billion cap set by the FHFA conservatorship agreement. The new agreement, however, maintained the wind-down requirement of 10% annual reductions to the retained portfolio cap until it reached $250 billion, just from a higher starting point. These modifications were formally established in an amendment of the SPSPA agreement on May 6, 2009. On December 31, 2008, the total retained portfolio was approximately $792 billion, implying a maximum increase of $108 billion by the end 2009, an increase of $18 billion by end 2010, a decrease of $63 billion by end 2011 and a total $542 billion reduction by the end of 2022. Based on Fannie's current mortgage portfolio, the revision also delayed requiring Fannie reduce its portfolio in 2010, increasing that limit by $45 billion relative to the first SPSPA.[58] We measure the impact of the SPSPA amendment as the difference in portfolio limits and mandated reductions before and after the amendment, assigning an annualized increase in Fannie's potential portfolio of $50 billion starting in February 2009.

In conjunction with the rollout of the Homeowner Affordability and Stability Plan, the Treasury Department also announced that it was amending the SPSPAs to increase the Treasury's maximum funding limit for each Enterprise from $100 billion to $200 billion (Department of the Treasury (2009a)). Neither Fannie nor Freddie were close to having exhausted the initial $100 billion, having collectively drawn about $66 billion to date, but the move was intended to build confidence. The increased funding commitments were intended to help the Enterprises "*carry out ambitious efforts to ensure mortgage affordability for responsible homeowners, and provide forward-looking confidence in the mortgage market*" (Department of the Treasury (2009b)). The May amendments to the SPSPA also increased the Enterprises' maximum permissible level of indebtedness from 110% of indebtedness as of June 30, 2008, as stipulated in the first agreement, to 120% of the prevailing retained portfolio limit.

Market analysts characterized the administration as exploiting control over the Enterprises in order to address the foreclosure crisis, and in a manner that would probably worsen their losses—hence the increased Treasury commitments and continued purchase of agency securities to assuage investors (Dow Jones Newswires (2/18/2009)). For their part, Fannie promised to work with the administration, the FHFA, and industry partners.

The stated purpose of the increased lines of funding and the elevated retained portfolio caps was "*to ensure the **strength and security of the mortgage market**, to help maintain mortgage affordability, and to help keep interest rates low*" (Department of the Treasury (2009b)). President Obama's remarks about the program emphasized that the government was taking "*major steps to **keep mortgage rates low***" and that the plan would "*help us **end this crisis***" (Obama (2009)). We classify the Homeowner Affordability and Stability Plan and increased retained portfolio limit as cyclically motivated.

Enterprise Transition Affordable Housing Goals for 2009 Issued: August 10, 2009

After reviewing market conditions, FHFA concluded that the affordable housing goals for 2009 would not be feasible unless adjusted. Revised goals issued August 10 lowered the low- and moderate-income goal from 56% to 43% in 2009; the underserved areas goal from 39% to 32%; and the special assistance goal from 27% to 14%. The reason given by FHFA was that adverse market conditions, such as stricter underwriting standards, increased standards of

[58] Before the SPSPA amendment, these corresponding portfolio changes would have been an increase of $58 billion in 2009, decreases of $27.0 and $103.5 billion in 2010 and 2011 respectively and a total $542 billion reduction by the end of 2022.

private mortgage insurers, and the elevated rate of unemployment, would result in the origination of fewer goals-qualifying loans, as would a surge in refinancing. Moreover, the increased market share of mortgages insured by the government and decrease in private-label MBS would also contribute to fewer goals-qualifying mortgages available for purchase by the Enterprises (74 FR 39873). The FHFA rule also expanded the mortgage qualification for housing goals to include any mortgages already held or guaranteed by the Enterprises that had been modified as part of the Homeowner Affordability and Stability Plan (see above).

Because Fannie and Freddie were already committed to temporarily expanding their retained portfolios to support the mortgage market (see above) and this policy was intended to reflect a changing landscape in mortgage originations, we assign do not consider this a significant policy change affecting their retained portfolios.

Second Amendment to Senior Preferred Stock Purchase Agreement Announced: December 24, 2009

On December 24, 2009, the Treasury Department announced amendments to both SPSPAs that would provide unlimited access to credit for Fannie and Freddie. The move was made just before the December 31, 2009 deadline stipulated by HERA for the Treasury to act without Congressional approval and authorization of additional funds. The amendments removed the cap from each agency's standing $200 billion funding line, through 2012. At the time of the amendment, the Treasury had injected $60 billion into Fannie and $51 billion into Freddie—well shy of their collective standing $400 billion funding line (Dow Jones News Wires (12/24/2009)). The Treasury Department stated that the action "*should leave no uncertainty about the Treasury's commitment to support these firms as they continue to play a vital role in the housing market during this current crisis*" (The New York Times (12/25/2009)). We do not classify this amendment to be a significant policy change affecting the Enterprises' retained portfolio, as the unlimited backstop was intended to build market confidence and, if necessary, absorb losses, as opposed to directly supporting purchases.

New Enterprise Housing Goals for 2010-2011 Announced: September 2, 2010

On September 2, 2010, FHFA released new housing goals for the remainder of 2010 and 2011, which were made effective October 14, 2010 (75 FR 55892). The new regulations modified the housing goal structure and established overhauled goals for single-family, owner-occupied home mortgage purchases for low-income families; very low-income families; and families living in geographical areas with lower-income populations, areas with high concentrations of minority residents, and federally declared disaster areas. The newly issued goals again included multifamily housing subgoals, and additionally set a new refinance mortgage goal for low-income families. The home purchase and refinance goals were expressed as minimum goal-qualifying mortgage shares of home purchase or refinance mortgages acquired by the Enterprises. The benchmark single-family goals were set at 27% for the low-income family home purchases goal, 8% for the very low-income family home purchases goal, 24% for the low-income areas home purchases goal, and 21% for the low-income family refinance goal.[59] The new goals also considerably restricted the pool of mortgages and mortgage securities that could count toward affordable housing goals, notably excluding private-label MBS, second mortgages, and single-family government loans (FNMA 10-K 2010, p. 45).

In line with restricting qualifying types of mortgages, FHFA stated that it did not intend for Fannie to undertake uneconomic or high-risk activities to meet the housing goals, but that support should not be withdrawn from these market segments simply because the Enterprises were in conservatorship (75 FR 55892). And it is not clear that the

[59] The low-income areas home purchases also included a subgoal that at least 13% of purchases were to finance mortgages for families in low-income census tracts or moderate-income families in minority census tracts.

goals were intended and/or perceived as binding; Fannie's 2010 10-K stated that if they missed the new housing goals, FHFA would start by reevaluating how feasible those goals had been. Fannie made its multifamily subgoals and exactly hit its low-income areas home purchases goal for 2010, but missed all other single family purchase and refinancing goals (FNMA 10-K 2010, p. 45). In 2011, Fannie again made its multifamily subgoals and hit its refinancing goal, but missed all single family purchase goals (FNMA 10-K 2011, p. 48).

Because this policy in part reflected changing mortgage market conditions and was not intended to expand purchase volumes, merely to retain some support for various segments of the market while maintaining "sound financial conditions of the Enterprises," we do not consider this a significant policy change affecting their retained portfolios.

Third Amendment to Senior Preferred Stock Purchase Agreement Announced: August 17, 2012

Policy Change	Agency	Impact	News	Effective	Classification
Portfolio Limit Decrease	FNMA	-$22.16 billion	Aug. 2012	Aug. 2012	Non-Cyclical

Freddie Mac returned to profitability in the fourth quarter of 2011, and Fannie Mae followed suit the following quarter (McLean (2015), pp. 114-115). The second quarter of 2012 was the first quarter since being taken into conservatorship when both agencies were able to pay the required 10% dividend on Treasury's senior preferred stock (The Financial Times (8/17/2012)). The positive net worth requirement in the SPSPAs forced Fannie and Freddie to borrow from the Treasury whenever their earnings fell short of the required 10% dividend, thus increasing the overall Treasury injection on which dividends would be assessed. Fannie and Freddie had collectively borrowed $188.4 billion through 2012Q2, some of which had been used to finance $45.7 billion in required dividend payments (Reuters (8/17/2012)). The circular practice of borrowing from the Treasury to repay the Treasury was reportedly undermining flagging market confidence in the Enterprises, particularly unnerving institutional and Asian sovereign investors of agency debt; market analysts also expected the 'borrow-to-repay problem' to worsen as the Enterprises' portfolio wind-down decreased earnings (The American Banker (8/20/2012)).

On August 17, 2012, the Treasury Department announced a third SPSPA amendment that would cap each Enterprise's retained portfolio at $650 billion as of December 31, 2012, and which accelerated the required portfolio limit wind down from an annual rate of 10% to 15% (Department of the Treasury (2012a)). The revised agreement would reduce the Enterprises' retained portfolios to $250 billion by 2018, four years faster than previously scheduled. Along with accelerating their wind down, the mandatory 10% quarterly dividend was replaced by a requirement that all quarterly net profits be paid to the Treasury—eliminating both the possibility of the Enterprises having to borrow from Treasury in order to pay dividends *and* of the Enterprises rebuilding positive net worth (The Financial Times (8/17/2012)). This revision to the SPSPAs was quickly and disparagingly coined the 'net worth sweep.' The revised portfolio caps were made effective upon signing the agreement, while the net worth sweep was to be made effective September 30, 2012.

As of July 31, 2012, Fannie's total retained portfolio was approximately $673 billion, implying a total mandated reduction by $23 billion by the end 2012, a reduction of $120.5 billion by the end of 2013 and a total reduction of $423 billion by the end of 2018. We measure the impact of the SPSPA amendment as the difference in mandated reductions before and after the amendment. The SPSPA previously would have capped Fannie's portfolio at $656.1 billion at the end of 2012 and $590.49 billion at the end of 2013, whereas the new amendment capped the portfolio at $552.5 billion

at the end of 2013.[60] We assign an annualized requisite portfolio reduction of \$22.16 billion for the year starting in August 2012, being the cumulative required reduction for 2013 pro-rated through July 2013 $\left((\$552.5 - \$590.49)\times\frac{7}{12} = -\$22.16 \text{ billion}\right)$.

While the Enterprises' share prices and excess returns became exceedingly volatile and rather uninformative after conservatorship sunk shares under a dollar, share movements nonetheless suggest that the third SPSPA amendment was genuinely unanticipated; Fannie's share price fell an unusually steep 20.0% on August 17, with trading volumes up more than ten-fold from the previous day of trading, and the news seemed to take the financial press and market analysts aback. The net worth sweep certainly flabbergasted Fannie's common shareholders—at this point primarily consisting of hedge funds, several of which had been buying up shares of Fannie and Freddie on the cheap—and the action precipitated numerous lawsuits challenging the legality of the third SPSPA.[61]

In a press release the Treasury stated: "*We are taking the next step toward responsibly winding down Fannie Mae and Freddie Mac, while continuing to support the necessary process of repair and recovery in the housing market. ... [We want] to* ***make sure that every dollar of earnings each firm generates is used to benefit taxpayers*** " (Department of the Treasury (2012b)). The Treasury statement made clear that the overwhelming motivation for the amendment was budgetary—protecting taxpayers—as opposed to economic.[62]

According to McLean (2015), Treasury officials were concerned about the optics of hedge funds earning windfall profits from a publicly funded bailout of the Enterprises as they returned to profitability (McLean (2015), p. 114). The net worth sweep was, however, publicly justified as assuaging the concerns of foreign institutional investors regarding the 'borrow-to-repay' practice (McLean (2015), p. 115). FHFA Director Edward DeMarco explained that "*These changes provide certainty to Fannie Mae, Freddie Mac and market participants as they continue to perform their critical mission of providing liquidity and stability to the country's housing market*" (The Washington Post (8/18/2012)). DeMarco had been a driving force behind the net worth sweep, which he reportedly believed would strong-arm Congress into following his advice to "*abolish the GSEs' charters as part of a broader legislative package of housing finance reform*" (National Mortgage News (12/16/2014)). The Treasury statement also signaled the intention to wind down Fannie Mae and Freddie Mac, rather than restore them to their former role. In a 2014 speech, DeMarco, recently retired, corroborated this view, noting that "*There was broad consensus at that time that not only had Fannie Mae and Freddie Mac failed, but the GSE model had failed* " (National Mortgage News (12/16/2014)).

The policy priority in Congress had also switched from promoting economic recovery to deficit reduction, most notably signaled by the origins and enactment of the Budget Control Act of 2011 (Pub. L. 112-25, enacted August 2, 2011). McLean (2015) noted that the third amendment came a year after the related showdown over raising the

[60] The portfolio being reduced by 10% annually from \$900 billion at the end of 2009 would have yielded \$590.49 by the end of 2013 (\$900 $\times(0.9)^4$), while the new 15% rate reduction from \$650 billion at the end of 2012 would have implied a portfolio limit of \$552.5 billion by the end of 2013 (\$650 $\times(0.85)$).

[61] Almost all of these challenges have been thrown out to date based on HERA's highly restrictive limitations upon judicial review when the agencies are in FHFA conservatorship (see SEC. 1367(a)(11)(D)).

[62] The five "*important objectives*" advanced by the amendment, in order highlighted in the statement, were: "*1) Making sure that every dollar of earnings that Fannie Mae and Freddie Mac generate will be used to benefit taxpayers for their investment in those firms; 2) Ending the circular practice of the Treasury advancing funds to the GSEs simply to pay dividends back to Treasury; 3) Acting upon the commitment made in the Administration's 2011 White Paper that the GSEs will be wound down and will not be allowed to retain profits, rebuild capital, and return to the market in their prior form; 4) Supporting the continued flow of mortgage credit by providing borrowers, market participants, and taxpayers with additional confidence in the ability of the GSEs to meet their commitments while operating under conservatorship; and 5) Providing greater market certainty regarding the financial strength of the GSEs*" (Department of the Treasury (2012b)).

federal statutory debt ceiling, and by reducing Treasury's borrowing, the net worth sweep "*helped buy breathing room*" during subsequent fiscal showdowns (McLean (2015), p. 117). The practical effect was a significant decrease in the federal budget deficit, with Fannie and Freddie remitting more to the government as a result of the net worth sweep than they had initially borrowed. CBO estimated that the Enterprises had cumulatively paid the Treasury dividends and net earnings of $250 billion as of September 2016, and were projected to pay an additional $180 billion over the next decade under current law (CBO (2016), p. 1).[63]

There was bipartisan support for the third amendment, with Republicans supportive of starving the Enterprises of capital—seen as preventing them from rebounding, and a step toward killing them off entirely—and Democrats supportive of de facto nationalization as retaining the agencies public mission without privatizing their upside gains. The housing market had begun to recover, enough so that the Enterprises' were in a position to start rebuilding their capital bases, and the accelerated wind down only served to reduce support to the housing market. We thus classify the third SPSPA amendment as motivated by varying political priorities and budgetary concerns, as opposed to being cyclically motivated.

New Enterprise Housing Goals for 2012-2014 Issued: November 13, 2012

On November 13, 2012, the FHFA issued final rules establishing new benchmark levels for the single-family housing goals for 2012 through 2014, to be made effective December 13, 2012 (77 FR 67535). The benchmark single-family goals for Fannie were decreased from 27% to 23% percent for the low-income home purchase goal; from 8% to 7% for the very low-income family home purchase goal; and from 21% to 20% for the low-income family refinance goal. In justifying the reduced benchmarks, FHFA pointed out that Fannie and Freddie were both unable to meet the higher benchmarks set for 2010-2011 (77 FR 67535).

Because this policy was not intended to expand purchase volumes, merely to retain some support for various segments of the market while maintaining "sound financial conditions of the Enterprises," and does not appear to have been a binding constraint for the Enterprises, we do not consider the revised goals a significant policy change affecting their retained portfolios.

4.2 Federal Home Loan Mortgage Corporation

The Federal Home Mortgage Loan Corporation was established under the Emergency Home Finance Act of 1970. The purpose of the FHLMC was to create a secondary market for conventional mortgages by purchasing mortgages from insured financial institutions, limiting its customers to FHLBank System members, commercial banks and other insured S&Ls and mutual savings banks. Ownership was placed with the FHLBanks, and the FHLB Board originally served as Freddie's Board of Directors.[64] Freddie was authorized to purchase and make commitments to purchase residential mortgages from the FHLBanks and their members, the FSLIC, or other financial institutions with government-insured deposits. Freddie Mac was

[63] Congress had set prior precedent for exploiting the conservatorship of Fannie and Freddie for budgetary purposes; the Temporary Payroll Tax Cut Continuation Act of 2011 (Pub. L. 112-78, enacted December 23, 2011) required the Enterprises increase fees on new guarantees by 10 basis points, to be used as an offset for extending the expiring payroll tax cut. The Enterprises paid $8 billion in such guarantee fees to the Treasury over 2013-2016 (CBO (2016), p. 4)

[64] Indirect ownership thus was with the members of the FHLBank System and in 1984 S&Ls were allowed to recognize this indirect ownership as a way to strengthen their balance sheet.

to raise funds by issuing debt securities without explicit leverage restrictions (unlike Fannie Mae) and by selling MBS backed by FHA/VA mortgages. In 1971, Freddie started a program of default-guaranteed pass-through securities backed by conventional mortgages (or 'participation certificates').

Freddie Mac was initially exposed to far less interest rate risk than Fannie Mae because its MBS were largely sold to third parties. Consequently, Freddie's retained portfolio remained fairly small relative to that of Fannie through the 1980s, as it was used primarily to fund inventory for pooling mortgages into MBS or to fund new mortgage purchase programs where volume was not yet sufficient to support securitization. While mortgage purchases were primarily financed by debt in its first years of operation, purchases were primarily being financed through MBS issuance by 1976.

In 1989, FIRREA turned Freddie from a corporation owned by the thrift industry to a publicly traded shareholder-owned corporation. FIRREA also transferred regulatory authority to HUD, and expanded Freddie's secondary mortgage market objectives to include promoting housing for low- and moderate-income borrowers. After its public listing, earnings pressure drove Freddie to exploit the profitability of balance sheet expansion, and its retained portfolio began catching up with Fannie (Greenspan (2005)). Accounting scandals exposed at first Freddie then Fannie in the early 2000s, however, prompted greater regulatory oversight over Freddie Mac and the imposition of portfolio limitations. In September 2008, Freddie was placed under the conservatorship of the FHFA, and was ordered to first increase then gradually reduce its portfolio of mortgage assets.

Emergency Home Financing Act of 1970 (Pub. L. 91-351) Enacted: July 14, 1970
See listing under FNMA (Sec. 4.1) for legislative and economic context.

On July 24, 1970, the Emergency Home Finance Act of 1970 chartered the Federal Home Mortgage Loan Corporation, or Freddie Mac, in order to create a secondary market for conventional mortgages purchased from insured financial institutions. Title III of the Act, the Federal Home Loan Mortgage Corporation Act, established the corporation as a subsidiary of the FHLBS and a member of each of the FHLBanks. Unlike Fannie, Freddie's charter act did not initially define a statutory purpose, but according to Bartke (1973), congressional intent was for Freddie to supplement Fannie in providing additional funds for home building and buying, as well as to alleviate the periodic liquidity problems facing the S&L industry. Freddie was authorized to purchase and make commitments to purchase residential mortgages from the FHLBanks and their members, the FSLIC, or any other financial institution whose deposits were insured by a federal agency. Purchases of conventional mortgages were required to be of quality acceptable to private investors and were restricted to those whose principal balance outstanding was under 75% of the value of the property securing the mortgage, unless the seller retained a participation of at least 10%, the seller agreed to repurchase the mortgage on demand, and the portion of principal balance outstanding exceeding 75% was insured by a qualified private insurer. Another restriction was that conventional mortgages originated more than one year before purchase could not exceed 10% of total purchases. Finally, the Act mandated loan limits "comparable" to Section 203(b) FHA mortgages, which were $33,000 at the time of enactment.

Initial capital was provided through $100 million in nonvoting common stock issued only to the FHLBanks. As

the owners of the FHLBanks, the thrift industry therefore indirectly owned Freddie Mac. Because the stock was nonvoting, however, the FHLBanks could not not directly influence corporate policy. Freddie was exempt from all federal and state taxation, granted all the rights and limitations of FHLB membership, and allowed to borrow and issue market securities. While Fannie was subject to a debt-to-capital limitation, there was no such analogous restriction for Freddie. The Act also prescribed financing through MBS, but such securities could only be issued against pools of FHA/VA mortgages.

Mortgage purchases were initially financed through long-term debt issuance. In its first year of operation, the corporation purchased $326 million in FHA/VA mortgages. In 1971, Freddie Mac developed a continuously offered program for buying participation interests in conventional mortgages. Later in 1971, Freddie started issuing Mortgage Pass-through Certificates (PCs), the industry's first conventional mortgage security. PCs were mortgage pools guaranteed by the corporation as to timely payment of interest and full return of principal. Sales of PCs rapidly increased from $67 million in 1971 to $493 million in 1972. Development of the security was part of the corporation's strategy to reach investors who traditionally had not financed mortgage credit. Because of tight credit markets from 1973 through 1975 and an investor base comprised mostly of S&Ls, the PC did not become the corporation's major source of financing until 1976 (FHLMC Annual Report 1980, p. 34). The conventional whole loan purchase program was introduced in 1972. By December 31, 1972, Freddie had accumulated $144 million in conventional mortgage loans in portfolio, and another $141 million in participations in conventional mortgage loans (FHLMC Annual Report 1972).

From the beginning, Freddie clearly planned to steer a very different course than Fannie, and focused overwhelmingly on securitization rather than portfolio growth. The first annual report in 1972 stated that: "*FHLMC does not seek to operate the national secondary mortgage market but, rather, to create an economic and regulatory climate in which the private sector can take on that function*" and "*While the temptation simply to buy mortgages and sell bonds is great, such activity does not contribute to creation of the kind of privately operated liquid secondary mortgage that FHLMC is trying to help develop* " (FHLMC Annual Report 1972, pp. 5, 8).

Presidential Plan To Revitalize the Housing Market Announced: May 10, 1974

Policy Change	Agency	Impact	News	Effective	Classification
Subsidized Mortgage Purchase Program	FHLMC	+$1.5 billion	May 1974	May 1974	Cyclical

On May 10, the Nixon administration authorized Freddie to make $3 billion worth of below-market forward commitments to purchase conventional mortgages from the member institutions of the FHLBank System, with funds provided by the Treasury, in support of the sagging housing industry. The program was financed by pass-through of FHLBank System borrowings from the Treasury using its statutory standby loan authority. When Freddie launched the program on May 20, lenders contracted for a record $581 million worth of the commitments in a single day. By the end of the year, Freddie had taken delivery of $696 million worth of loans in fulfillment of these commitments and, perhaps more importantly, had geared up its underwriting and purchasing staffs in expectation of delivery of the rest of the $3 billion (FHLMC Annual Report 1974, p. 3). Using the two-year rule, we assign an annualized $1.5 billion increase in the year starting May 1974. This program, also referred to as a "tandem plan," would pave the way for the larger Brooke-Cranston tandem program for conventional mortgages funded through GNMA, which was authorized in October 1974

(Senate Committee on Banking, Housing and Urban Affairs (1976b), p. 83).[65]

As part of the same housing market plan, the administration also authorized the FHLBB to provide $4 billion in loan advances to member S&Ls at interest rates below their usual borrowing costs.

In his May 10 statement about the plans and pending legislation to revitalize the housing market, the President offered the following motivation for these policy changes: "*The higher cost of money affects all sectors of the economy, but none more directly than the housing market. **The Nation's housing industry**, which had been producing homes at record high rates in 1971, 1972, and 1973, **is now operating far below its potential**.*" These policy changes occurred in the midst of the recession lasting from November 1973 through March 1975. We classify the president's plan to revitalize the housing market as cyclically motivated.

Under the Treasury-FHLB program, Freddie ultimately acquired $1.575 billion in conventional mortgage loans. The outstanding principal balance of the advances for the program was retired in 1976 and 1977, with the final payment made on February 25, 1977 (FHLMC Annual Report 1977, p. 23).

Housing and Community Development Act of 1974 (Pub. L. 93-383) Enacted: August 22, 1974
See listing under FNMA (Sec. 4.1) for legislative and economic context.

Policy Change	Agency	Impact	News	Effective	Classification
Conforming Loan Limit	FHLMC	+$0.46 billion	Aug. 1974	Aug. 1974	Non-Cyclical

The limit on the outstanding balance of a conventional mortgage eligible for purchase by Fannie and Freddie was switched from the FHA Section 203(b) limit to the Section 5(c) limit for mortgages originated by insured S&Ls. The Act additionally raised the Section 5(c) limit from the $45,000 to $55,000, which thus became the new conforming loan limit. The net increase was $22,000, from the standing $33,000 203(b) limit, which the Act also raised to $45,000. The reason for the change had more to do with the Freddie than with the Fannie (HUD (1987)). As the Senate Committee on Banking, Housing, and Urban Affairs report explained, it was "*not realistic to permit savings and loans to originate $45,000 mortgages and to restrict Freddie to the purchase of mortgages with a maximum principal mortgage tied to a varying FHA limit*" (Senate Committee on Banking (1974)). The change for Fannie apparently followed in order to roughly maintain parity between both GSEs (HUD (1987), p. 35).

The Act also increased the limit on Fannie and Freddie's holdings of conventional mortgages originated more than one year prior to purchase, from 10% to 20% of aggregate portfolio holdings.

The House committee report stated that raising FNMA's loan limit from $33,000 to $55,0000 "*would permit FNMA to serve much the same housing market in terms of constant dollars as it was authorized to serve when the Emergency Home Finance Act was enacted [in July 1970]*" (House Committee on Banking and Currency (1974), p. 29). The increase in the 5(c) limit was intended to "*help adjust the limit in line with the substantial increases that have occurred in recent years in the cost and value of single family homes, particularly in the nation's high cost areas*" (House Committee on Banking and Currency (1974), p. 43). We accordingly score the conforming loan limit as keeping Fannie's net purchase activity in line with interim home price inflation, potentially increasing FNMA's

[65] See GNMA (4.3) for an overview of the various tandem programs. Unlike GNMA, FHLMC was permitted to hold the mortgages it acquired for extended periods of time.

retained portfolio by $1.14 billion, up 16.8% from the net purchase volume in the year before enactment (see listing under FNMA, Sec. 4.1).

As Freddie's purchases only began in 1970Q4, the July 1970 enactment of Emergency Home Finance Act clearly does not work as a comparable benchmark for Freddie's portfolio activity, and the House, Senate, and conference committee reports accompanying the Housing and Community Development Act of 1974 offer no comparable indication of the effect of conforming loan limit increases for Freddie. The increase in the conforming loan limit for Fannie, however, was meant to maintain parity between the two GSEs, and both were operating in the same segment of the market. To quantify the impact of the conforming loan limit increase for Freddie, we apply the same 16.8% relative increase for Fannie's net purchases to Freddie's portfolio activity. Freddie's net purchases were, however, far more volatile, given their prevailing business model focused solely on securitization, so we assume the Act would have increased Freddie's purchasing power based on their retained portfolio instead of net purchases. Applying a 16.8% increase to Freddie's $2.7 billion average retained portfolio over 1973Q3 and 1974Q2, the year before the bill's enactment, implies an increase of $456 million, which we assign to the year starting August 1974. In practice, Freddie's mortgage portfolio increased from $3.1 billion in May 1974 to $4.9 billion in May 1975.

As with Fannie, we classify the policy change as unrelated to the business or financial cycle (see listing under FNMA, Sec. 4.1, for a discussion of context and classification).

Emergency Home Purchase Assistance Act (Pub. L. 93-449) Enacted October 18, 1974

See listing under GNMA (Sec. 4.3) for an overview of the Act and Brooke-Cranston Tandem program.

The Act established the Brooke-Cranston Tandem program, which tasked GNMA with slowing or stopping declines in housing market activity by making commitments and purchases of conventional mortgages from originators, as opposed to the FHA/VA mortgages to which its activity was otherwise restricted. Eligible conventional mortgages were, however, limited to an 80% LTV ratio and $42,000 loan limit, well below the conforming loan limit for conventional mortgages. As Ginnie was statutorily required to deal in government-guaranteed mortgages, Freddie Mac and Fannie Mae served as agents of GNMA for its commitments and purchases of below-market rate conventional mortgages, with each institution allocated half of the funds allocated to conventional mortgage purchases (Senate Committee on Banking, Housing and Urban Affairs (1976b), p. 14). Ginnie initially asked Freddie to act as its agent in purchasing $1.5 billion of conventional mortgages at below-market rates. By year-end, $1.1 billion of this fund had been committed and the remainder was going fast. Actual mortgage purchases were to begin in January 1975 (FHLMC Annual Report 1974, p. 3).

As Fannie and Freddie were mere conduits, we only consider the Brooke-Cranston Tandem program to be a significant policy change affecting Ginnie Mae (see listing under GNMA, Sec. 4.3).

Housing and Community Development Act of 1977 (Pub. L. 95-128) Enacted: October 12, 1977

See listing under FNMA (Sec. 4.1) for legislative and economic context.

Policy Change	Agency	Impact	News	Effective	Classification
Conforming Loan Limit	FHLMC	+$0.21 billion	Oct. 1977	Oct. 1977	Non-Cyclical

The Act raised the conforming loan limit for conventional mortgages from $55,000 to $75,000, effective immediately. The conforming loan limit formula was revised to 125% of the S&Ls Section 5(c) limit, which was also revised upwards from $55,000 to $60,000.

As with FNMA, we quantify the impact of the increase in FHLMC's conforming loan limit by assuming the change would restore Freddie's real purchasing power relative to purchase volumes surrounding the August 1974 enactment of the Housing and Community Development Act of 1974, pursuant to the House and Senate Committee report language (see discussion in listing under FNMA, Sec. 4.1). Given their prevailing business model focused on pass-through securitization, Freddie's net purchases were, however, far more volatile Fannie's, so we again quantify the Act as having increased Freddie's portfolio activity relative to its retained portfolio instead of net purchases.

The $3.04 billion average retained portfolio over 1973Q4 through 1974Q3 would have translated to $4.08 billion at the end of September 1977, adjusted for the 34.3% increase in OFHEO's seasonally adjusted Constant-Quality House Price Index for new homes sold over 1974Q3 and 1977Q3. Relative to Freddie's average $3.87 billion retained portfolio over 1976Q4 and 1977Q3, the year before enactment of the Housing and Community Development Act of 1977, this would have represented an increase of roughly $210 million, which we assign to the year starting October 1977. To the extent that the enacted provisions were meant to anticipate further near-term inflation, we view this as a conservative estimate.

As with Fannie, we classify the policy change as unrelated to the business or financial cycle (see listing under FNMA, Sec. 4.1, for a discussion of context and classification).

Housing and Community Development Amendments of 1978 (Pub. L. 95-557)

Enacted: October 31, 1978

Policy Change	Agency	Impact	News	Effective	Classification
Mortgagee Expansion	FHLMC	+$2.0 billion	Oct. 1978	May 1979	Non-Cyclical

The Act amended the FHLMC Act to loosen restrictions and allow purchases from mortgage bankers, specifically "*any mortgagee approved by the Secretary of Housing and Urban Development for participation in any mortgage insurance program under the National Housing Act*." These amendments were scheduled to become effective on May 29, 1979 (two hundred ten days after enactment) unless FHLMC prescribed an earlier date, which it did not.

The House report made clear that the amendment was clarifying a long-standing question of whether mortgage brokers were eligible to service loans sold to Freddie, which had repeatedly surfaced before the committee. Confusion had been amplified by language in the conference report for the Housing and Community Development Act of 1974 allowing for limited servicing. Freddie's regulations did not explicitly rule out loan servicing by mortgage bankers, but its regulations were designed to be met by S&Ls, and de facto ruled out loan servicing by others (House Committee on Banking (1977a), p. 38). Freddie had submitted a report to Congress on January 31, 1978, proposing "rules of the road" for responsibly authorizing mortgage bankers to directly sell loans to the corporation (Senate Committee on Banking, Housing and Urban Affairs (1978), p. 52). The House report explained that: "*Underlying this whole issue was a basic question of whether the Congress created FHLMC solely to assist only one segment of the mortgage lending industry, to provide a secondary market facility, to the exclusion of all other segments.* ***It is the position of the committee that this facility created by the Congress was to assist the housing markets generally and not one favored***

segment. *It has been stated that mortgage bankers have FNMA and savings and loans have FHLMC. The committee rejects that justification.* ***These are entities created by Congress generally to assist the mortgage credit markets and not benefit just parts of it***" (House Committee on Banking (1977a), p. 39).

After the bill cleared both the House and Senate, the *Washington Post* reported that allowing mortgage bankers to sell to FHLMC "*could result in an additional $2 billion being recycled into the residential mortgage market by 1979*" (The Washington Post (5/13/1978)). Based on this projection, we assign an annualized increase in purchase capacity of $2 billion for the first year of operation, dated to the enactment of the bill in October 1978.

The Senate bill was the product of 11 hearings held between January and April 1978, and the bill enacted in October was the product of a slow and deliberate legislative process. The Act was focused on routine programatic authorizations and reforms aimed at longer-term housing policy objectives. The accompanying Senate committee report made no mention of housing starts, concerns about a recession, or other cyclical motives. The accompanying House report characterized the economy as "*in its third year of recovery from the recession of 1975*," noted that construction unemployment was unusually low, and housing starts were roughly unchanged from the previous year, although inflation and higher interest rates were projected to slightly dampen home sales and housing starts.[66] The overview of projected impacts of the bill in stressed creating certain types of housing units, but in no way stressed boosting employment or overall housing starts. Moreover, the mortgagee expansion was intended to resolve a longstanding regulatory question and better fulfill congress's original intent with respect to the creation of Freddie Mac. We thus classify the expansion of FHLMCs eligible mortgagees as clarifying past congressional intent and meeting longer-term policy objectives, while unrelated to the business or financial cycle.

Housing and Community Development Amendments of 1979 (Pub. L. 96-153) December 21, 1979

Policy Change	Agency	Impact	News	Effective	Classification
Conforming Loan Limit	FHLMC	+0.86 billion	Dec. 1979	Dec. 1979	Cyclical

The Act amended the FHLMC Charter Act to open purchase of Freddie's mortgages, mortgage securities, and obligations to any person trust or legally chartered organization, and granted Freddie's securities the same legal standing as U.S. government securities, up to a sunset of June 30, 1985.[67] The Charter Act was also amended to make Freddie's securities and obligations legal collateral, including for public deposits. And the Act newly allowed Freddie to purchase liens and interests in housing cooperatives. The committee report accompanying the House bill, where the amendments to the Charter Act originated, explained that "*intended to assure a broader market for the Corporation's securities*" (House Committee on Banking (1979), p. 26).

The Act also raised the conforming loan limit for conventional mortgages from $75,000 to $93,750 by increasing the benchmark savings and loans Section 5(c) limit from $60,000 to $75,000, effective immediately. In explaining the increase in the FHA 203(b) limit, the committee report accompanying the Senate bill noted that the median sales

[66]The economic overview and discussion of inflation, housing, and the bill's likely impacts were included pursuant to Rule XI, Clause 2(1)(4) of the Rules of the House of Representatives, which required the committee make a statement regarding the inflationary impact of the bill. The economic overview was not motivated by cyclical economic concerns.

[67]More specifically, the amendment established that: "*Where State law limits the purchase, holding, or investment in obligations issued by the United States by such a person, trust, or organization, such Corporation mortgages, obligations, and other securities shall such Corporation mortgages, obligations, and other securities shall be considered to be obligations issued by the United States for purposes of the limitation.*" (Pub. L. 96-153, Sec. 316(a).)

price of homes had jumped roughly 30% since the loan limits had last been increased by the Housing and Community Development Act of 1977 (see above), and that the FHA's market share had dropped from roughly 15% to 5% because loan limits had not kept up with inflation or the market (Senate Committee on Banking, Housing and Urban Affairs (1979), p. 14). Regarding the 5(c) limit, the report similarly explained that "*Because home prices have escalated 20 to 25 percent in the past 2 year, the committee believes that the $60,000 limit has become obsolete and is severely restricting the ability of thrifts to meet the borrowing amounts requested by today's home buying public*" and that increasing that limit to $75,000 was an adjustment to "*reflect inflation in home prices (and increase in mortgage size) since last amended in 1977*" (Senate Committee on Banking, Housing and Urban Affairs (1979), p. 20).

To quantify the impact of the increase in FHLMC's conforming loan limit, we assume, pursuant to the Senate Committee report language, that the change would restore Freddie's retained portfolio activity to that proximate to the October 1977 enactment of the Housing and Community Development Act of 1977 (see above).[68] The $3.41 billion average portfolio over 1977Q1 through 1977Q4 would have translated to $4.27 billion at the end of September 1979, adjusted for the 25.5% increase in OFHEO's seasonally adjusted Constant-Quality House Price Index for new homes sold over 1977Q4 and 1979Q3; relative to an average portfolio of $3.41 billion over 1978Q4 to 1979Q3, this would imply an annualized portfolio increase of $857 million, which we assign to the year starting December 1979. In practice, Freddie's portfolio grew from $3.9 billion in December 1979 to $5.0 billion in December 1980.

While the Act was signed into law shortly before the economy slipped into the recession of January through July 1980, the accompanying House committee report emphasized that the bill took "*account of the specter of inflation and the need for fiscal restraint... and the need to mitigate housing inflation*" (House Committee on Banking (1979), pp. 3-4). The Annual Report of the Federal Reserve Board for 1979 noted that housing starts had fallen sharply during the end of the year, as financial conditions tightened and thrift's deposit growth slowed (Annual Report of the Federal Reserve Board 1979, pp. 5, 7). Unlike the longer legislative horizon and policy scope of the Housing and Community Development Acts of 1974 and 1977, the Amendments of 1979 were passed in shorter order, and during the credit crunch that lasted from 1978Q2 through 1981Q4. We therefore classify this policy as cyclically motivated.

Housing and Community Development Act of 1980 (Pub. L. 96-399) Enacted: October 8, 1980

The Act instituted a formulaic peg for annually adjusting the conforming loan limit, which was tied to home prices. The new formula had the effect of setting the conforming loan limit at $98,500 effective January 1, 1981, up from the previous limit of $93,750. See listing under FNMA (Sec. 4.1).

Adjustable Rate Mortgage Program Announced: May 28, 1981

Policy Change	Agency	Impact	News	Effective	Classification
ARM Program Expansion	FHLMC	+$0.367 billion	May 1981	July 1981	Cyclical

The FHLBB had approved FHLMC to launch a secondary market program for variable rate mortgages on July 1, 1979 (The American Banker (5/14/1980)). In a speech in July 1979, FHLMC President Brinkerhoff announced

[68] Given their business model focused on pass-through securitization, Freddie's net purchases remained far more volatile Fannie's, so we again score the Act as having increased Freddie's portfolio activity on a retained portfolio basis instead of net purchases.

that Freddie was gearing up to launch a secondary market for graduated payment mortgages (GPM) and variable rate mortgages in 1980, and stated that "*during the first 18 months of the program, [is] expected to buy from $500 million to $600 million worth of the [GPM] mortgages*" (The American Banker (7/16/1979)); the timing of the ARM program's launch, however, was rather uncertain given complications in standardizing documents meeting various state requirements. In May 1980, FHLMC announced that in addition to developing a GPM secondary market it was also developing standardizing documents for three-to-five year renegotiable rate mortgages (RRMs), and intended to launch a secondary market for RRMs by December. In November 1980, FHLMC began sending standardized ARM origination documents to mortgagees in preparation to launch a secondary market for ARMs in 1981 (The American Banker (11/21/1980)).

As Freddie was developing documentation for an ARM program, the supply of ARM originations in the primary market was an impediment to launching a program. Primary market deregulation only effectively authorized ARM issuance in early 1981, with the FHLBB authorizing Federal S&Ls to issue ARMs and variable rate mortgage insurance on April 21, 1981 (46 FR 24148), which effectively opened the door to FHLMC implementing a program; the OCC and NCUA also approved ARM programs and lifted interest rate restrictions imposed on federally chartered banks and thrifts around the same time (see FNMA, Sec. 4.1). Without established secondary market support, however, mortgagors were initially hesitant to issue ARMs, and there was little issuance until Fannie and Freddie unveiled their secondary purchase program guidelines (Fannie launched an ARM program of its own a month after Freddie).[69] Because secondary market entry into ARMs was de facto set in motion immediately following deregulation of the primary mortgage market, and was necessary for ARMs to catch on in primary markets, we consider entry into ARMs by Fannie and Freddie as driven by U.S. federal housing credit regulatory policy changes.

FHLMC announced on May 28, 1981 that it would begin a pilot program purchasing ARMs on July 1, 1981. At the press conference, an FHMLC official said that the purchasing program would initially be funded through debt financing. He added that the program would probably borrow no more than $1 billion, and then would offer participation certificates (The American Banker (5/29/1981)). Taking the midpoint estimate of $550 million from Brinkerhoff's projected GPM purchase volume around the same time as a proxy for entry into a new market, we assign an annualized increase in purchase capacity of $367 million ($\frac{500+600}{2} \times \frac{12}{18} = 367$) dated to the year stating May 1981, given the considerable and long-standing uncertainty about the timing of the program's launch and requisite approval of primary market originations.

The program expansion into ARMs was made in an environment of heightened interest rate risk and depressed earnings resulting from monetary tightening, and the program took effect in the midst of the credit crunch persisting from 1978Q2 through 1981Q4. Moreover, the ARM program and broader deregulatory movement favoring ARMs was intended to help mortgage lenders better manage interest rate risk in the prevailing economic context. Freddie's Annual Report for 1981 explained that the FHLBB's approval of ARMs in the primary market was explicitly motivated by elevated funding costs and heightened interest rate risk: "*Early in 1981 traditional mortgage lenders realized they could no longer afford solely to make 30-year loans with fixed interest rates while the interest rates they paid to borrow short term funds continued to rise. The Federal Home Loan Bank Board (FHLBB) responded by issuing regulations in April which permitted federal savings and loans to originate mortgage loans with adjustable rates. The adjustable*

[69] Freddie's Annual Report for 1981 explained that the "*creation of a secondary market for adjustable rate mortgages enabled lenders to initiate ARM programs, secure in the knowledge that the mortgages could be sold*" (FHLMC Annual Report 1981, p. 15).

mortgage allows lenders the advantage of adjusting up wards the rates on loans in their portfolio to protect them when their cost of funds goes up. The Mortgage Corporation acted by developing and introducing its own Adjustable Rate Mortgage (ARM) program for lenders" (FHLMC Annual Report 1981, pp. 14-15). Consequently we classify the ARM program's approval and launch as cyclically motivated, as we classify Fannie's program expansion into ARMs in June 1981 (see FNMA, Sec. 4.1).

Mortgage Purchase Amendments of 1981 (Pub. L. 97-110) Enacted: December 26, 1981

In May 1981, FHLMC had announced that it was preparing to request authorization from Congress to launch a new program guaranteeing securities backed by conventional mortgages, which it planned to submit in July (The American Banker (5/7/1981)). Freddie officials noted, however, that its "*current level of capital is not sufficient to support a large guarantor business*" and that it would also "*seek authorization to issue dividend-bearing stock that would be purchased by institutions participating in the guarantor program.*"

Congress opted for a more marginal deregulatory expansion into the conventional market and did not address Freddie's concerns about capital adequacy for supporting expanded secondary market operations. In December, the Act removed the portfolio limitations on FNMA and FHLMC holdings of conventional mortgages over one year old, which were previously limited to 20% of investments. Mortgages over one year old could only be purchased, however, from the FDIC, FSLIC, NCUA, or other sellers currently engages in mortgage lending or investing activities. The Act also prohibited FHLMC from imposing any fee or charge upon an eligible seller differing from that imposed upon FHLBank members. Shortly after passage, FHLMC's board eliminated the fee charged to non-FHLBS member mortgagees (HUD (1983)).

Preferred Stock Authorization (Pub. L. 97-289) Enacted: October 6, 1982

While the FHLBB imposed no statutory leverage or capital requirement on Freddie, their regulator kept mortgage holdings and operations aligned with what they deemed prudent capitalization. In 1981, FHLMC and FHLBB had concluded that Freddie was adequately capitalized for current operations, but had insufficient capital to safely expand operations, and needed to raise more equity than the $100 million provided by the FHLBanks pursuant to the Charter Act (HUD (1983), p. 15). Freddie's capital base was $430 million as of July 1981 (The Washington Post (7/13/1981)). In late 1981, Freddie found congressional sponsors to introduce legislation that would recharter and recapitalize the organization, notably by allowing it to issue preferred stock. But the proposal met substantial opposition in Congress and from the Reagan administration, which thought the bill did not go far enough toward full privatization. Freddie was proposing to convert its nonvoting common stock to voting shares and become a privately held, tax-paying entity while retaining a $200 million line of credit with the FHLBB—what it considered parity with Fannie Mae's Treasury backstop.

On October 6, 1982, the FHLMC Charter Act was amended to allow Freddie to issue preferred stock at the discretion of the Board of Directors, provided that such stock did not change the status of the nonvoting common stock previously issued (Pub. L. 97-289). In December 1984, the FHLBB approved a FHLMC dividend in the form of 15 million shares of preferred stock, pro-rated to the FHLBanks by each district's share of the initial $100 million common stock capitalization (National Mortgage News (1/7/1985)). The market valuation was quoted at roughly $600 million, although FHLMC said it would only show a transfer on its balance sheet at the book value of $150 million. Preferred shareholders would receive the first $10 million in FHLMC's annual dividends, and 90% of all additional dividends.

The FHLBanks subsequently transferred FHLMC's preferred stock dividends as a dividend to their member institution shareholders. The timing of the dividend was motivated by the imminent repeal of Freddie's federal tax exemption, effective January 1, 1985 (Pub. L. 98-369, see below). Restrictions were placed on the preferred stock so that it could only be traded among member institutions, each subject to a 1% ownership limitation (Treasury (1990), p. B-9).

This decision allowed thrifts to recognize on balance sheet a substantial portion of the value of Freddie Mac's stock, which they indirectly owned through the FHLBanks, thereby strengthening their balance sheets. The transfer was estimated to inject $600 million in previously unrecognized capital to members of the FHLBanks, but analysts estimated that the transfer of profits from FHLMC to thrift institutions would only marginally impact their balance sheets (The American Banker (12/11/1984)). Because Freddie's preferred stock issuance took the form of a dividend payment, we assign no impact on the retained portfolio, as it did not raise capital, and any alternative dividend made from retained earnings would likely have necessitated a reduction in assets and liabilities in line with the FHLBB's guidance.

This passthrough issue of preferred stock was quickly challenged by OMB, which requested a probe by the Department of Justice, on the basis that the preferred shares were functioning as common shares, because the remaining 10% of dividends above $10 million would also be transferred to the thrifts owning preferred shares. The Justice Department, however, unequivocally ruled in favor of FHLMC and the FHLBB in a letter dated January 25, 1985 (Department of Justice (1985)). Preferred shares began trading on the NYSE on January 23, albeit with the caveat that only members of the FHLBS could purchase shares.

By December 1985, the FHLMC advisory committee had voted unanimously to seek approval to repeal the restriction on trading, in large part to improve market liquidity and boost the price of shares (National Mortgage News (12/23/1985)). Broadening the base for ownership was also seen as a step toward public listing and full privatization, a longstanding priority for the Reagan administration.

Joint Resolution of Congress (Pub. L. 98-35) Enacted: May 26, 1983

In May 1983, President Reagan signed into law a Joint Resolution of Congress clarifying that all securities issued or guaranteed Freddie Mac were exempt from SEC securities regulations, "to the same extent as securities that are direct obligations of or obligations guaranteed as to principal or interest by the United States."

Deficit Reduction Act of 1984 (Pub. L. 98-369) Enacted June 27, 1984

Under the provisos of the Act, Freddie became subject to federal income taxes, effective January 1, 1985. JCT explained that "*[t]he tax exemption for Freddie Mac was originally intended to allow the corporation to accumulate adequate capital so that it could compete against other entities in the secondary mortgage market, including Fannie Mae, which is a taxable entity. The purpose of this tax exemption was not to provide Freddie Mac with a competitive advantage. In the past 14 years, Freddie Mac has become highly profitable and has accumulated sufficient capital to compete in the secondary mortgage market. As a result, Congress believed that the exemption from tax had fulfilled its function and had begun to provide Freddie Mac with a competitive advantage. Accordingly, Congress believed it appropriate to repeal the tax exemption for Freddie Mac*" (JCT (1984), p. 551). Thrifts, however, were granted a tax deduction for FHLBank dividends allocated from previously taxed FHLMC income, thereby avoiding double corporate taxation. Freddie was also granted a net operating carry back loss provision.

JCT estimated that the repeal of FHLMC's tax exemption and related tax adjustments would, on net, increase

federal receipts by $67 million in FY1985, $109 million in FY1986, $142 million in FY1987, $185 million in FY1988, and $240 million in FY1989 (JCT (1984), p. 551). These estimates imply roughly $94.25 million in net earnings otherwise on balance sheet that would be transferred to the Treasury in calendar year 1985.[70] Freddie Mac made $164 million in income tax provisions for 1985, reducing net income to $208 million, down from $267 million in 1984 (FHLMC Annual Report for 1985, p. 10). We assume this new tax liability was too small to have necessitated significant related portfolio reductions.

Secondary Mortgage Market Enhancement Act of 1984 (Pub. L. 98-440) Enacted: October 3, 1984

The Act clarified that the permissible maximum for loan purchases by FHLMC (and FNMA) applied to the full original principal, even if only a participation were purchased. FHLMC was also prohibited from guaranteeing MBS backed by mortgages not purchased by the corporation.

The Act also amended the definition of mortgage in the FHLMC Act to include subordinated liens. And the Act temporarily authorized FHLMC to purchase second mortgages for the first time and renewed Fannie's prior authorization to do so; this authorization was extended several times before being made permanent by the Housing and Community Development Act of 1987 (Pub. L. 100-242). See listing under FNMA (Sec. 4.1) for further discussion.

Second Mortgage Purchase Program Announced: January 1986

Policy Change	Agency	Impact	News	Effective	Classification
Second Mortgage Program	FHLMC	+$1.0 billion	Jan. 1986	Jan. 1986	Non-Cyclical

On January 7, 1986, Freddie Mac announced that it would be launching a new program to purchase second mortgages, and that a second mortgage securitization program would begin once a sufficient number of liens had been inventoried on portfolio (Dow Jones News Service (1/6/1986)). Fannie had started a second mortgage purchase program in 1981, under which it had purchased $5 billion in second mortgages to date, but was holding second mortgages on portfolio (see FNMA, Sec. 4.1).[71] Freddie announced that purchases would begin in January and after accumulating an initial $500 million in loans, it would begin issuing second mortgage pass-through securities, with the first issuance expected by early 1987 (The American Banker (1/8/1986)). Freddie Mac's acting vice president for sales and marketing projected that the corporation would purchase roughly $1 billion worth of second mortgages during calendar year 1986 (National Mortgage News (1/13/1986)). As this programatic expansion was enabled by recent statutory authorization (see above), yet the timing of such a program's launch was entirely uncertain, we assign an annualized increase in purchase capacity of $1 billion for the first year of operation, starting in January 1986.

In having proposed second mortgage authorization for Freddie, the Senate committee report accompanying Secondary Mortgage Market Enhancement Act of 1984 explained that "*The committee considers this amendment to be consistent with the established mission of both Fannie Mae and Freddie Mac to foster a nation-wide system of home finance. Second mortgages are becoming an increasingly important source of financing for homeownership... the Committee bill would help ensure that there is an adequate secondary market for subordinate loans that are used for*

[70]Calculations assume a 75-25 FY-CY split.

[71]A HUD ruling had provided authority for Fannie to deal in second mortgages in 1981, before enactment of Pub. L. 98-440 expanded statutory authority to FHLMC.

the specific purposes of purchasing or refinancing homes" (Senate Committee on Banking, Housing and Urban Affairs (1983), p. 13).

Freddie's 1986 Annual Report explained that its intent was "*to provide billions of dollars in housing equity for home owners and provide new opportunities for mortgage lenders who originate second mortgage loans*" and characterized the program expansion as expanding its 'product line' (FHLMC 1986 Annual Report, pp. 3, 23). That report also characterized the prevailing economic and mortgage market environment as a period of "*favorable market conditions*." The economy was neither in a recession nor credit crunch. Given Congress's intent to address changes in the structure of mortgage finance unrelated to the business cycle and Freddie's business motive for the program expansion, we classify the program expansion into second mortgages as unrelated to the business or financial sector.

Purchase Cap Announced: March 3, 1987

In early March 1987, FHLBB Chairman Gray announced that the regulator would limit Freddie Mac's mortgage purchases to $75 billion, a reduction relative to the corporation's record $103 billion worth of conventional mortgage purchases in 1986 (The American Banker (3/9/1987)). Freddie had previously projected in its budgetary request that it would purchase $75 billion worth of mortgages for the year, which the Board then adopted as its purchase limit—the first in Freddie's history (The Bond Buyer (9/15/1987)). The Board sent Freddie a letter dated March 3 instructing it to develop a plan detailing how the $75 billion maximum would be attained. After news of the purchase cap broke, Freddie's acting president downplayed the cap as "*a flexible one and [that it] might be raised if necessary*" (The American Banker (3/10/1987)).

The Board cited concerns about S&Ls' holdings and hedging use of floating rate CMOs and strips–securities attributed as "Freddie Mac products." Chairman Gray had also recently raised concerns that Freddie's market dominance was hurting thrifts' ability to raise funds in capital markets (The American Banker (3/10/1987)). But market analysts attributed the move as motivated by Gray's desire to reduce Freddie's activity in the secondary mortgage market, and as acting on behalf of the Reagan administration to circumvent Congress (The American Banker (3/10/1987)).

On September 14, Freddie Mac president and CEO Brendsel announced that the Board had lifted the cap on purchases, and projected that Freddie's purchases would total $85 billion for the year (The Bond Buyer (9/15/1987)). Brendsel had hinted the week before that the Board was interested in lifting the limit, and predicted it would be lifted by year's end. According to a Freddie spokesperson, altered "*market conditions have convinced the Bank Board to rescind the limit.*"

The $75 billion purchase cap does not appear intended or projected to be a binding constraint ex ante, and it certainly wasn't binding ex post. We thus do not classify the temporary purchase cap as a significant regulatory event affecting Freddie's mortgage holdings.

MBS Strips Authorization Authorized: March 25, 1987

On March 25, 1987, Freddie announced that the FHLBB had granted the corporation authorization to begin issuing stripped MBS (The Bond Buyer (3/26/1987)). Fannie had begun issuing stripped MBS in July 1986. Stripped securities split up the interest versus principal payments from a pool of mortgages to different groups of investors, whereas all investors proportionally receive both interest and principal payments in traditional pass-through securities. Freddie issued its first stripped interest-only, principal-only PCs in April.

This authorization amounted to securitized mortgage product diversification, not a significant regulatory event that would lead to an expansion or contraction of mortgage purchases.

REMICs Authorization Authorized: February 1988

In February 1988, FHLMC sought and received permission from the FHLBB to issue REMICs. The temporary authority granted permitted the issuance of $15 billion REMICS and other long-term debt between February 1988 and September 1989. Over the course of 1988, Freddie Mac sold nearly $13 billion in Multiclass PCs as REMICs (FHLMC Annual Report 1988, p. 3).

We do not consider this authorization a significant regulatory affecting FHLMC's purchases of mortgages or MBS because the development of the REMIC market largely resulted in the re-securitization of outstanding agency MBS (see discussion under FNMA, Sec. 4.1).

Public Listing of Freddie Mac Effective: January 3, 1989

Policy Change	Agency	Impact	News	Effective	Classification
Stock Split Capitalization	FHLMC	+$1.62 billion	Nov. 1988	Nov. 1988	Non-Cyclical

In July 1988, Senator Al D'Amato introduced a bill that would have removed barriers to trading Freddie's preferred stock and opened purchases to the public, which was seen as both a means to improving the balance sheets of the thrifts holding them and a step toward privatization (The New York Times (6/7/1988)). Precluding Congressional action, Freddie Mac's Board of Directors—still comprised of the FHLBB—-decided in July to remove the trading restrictions on the preferred stock, opening ownership to public investors for the first time. In conjunction with the Board's decision, Freddie Mac offered to exchange each share of original preferred stock, along with a $7 per share capital contribution, for four shares of new senior participating preferred stock (Treasury (1990), p. B-9). The status of the non-voting, non-tradeable common stock held by the twelve FHLBanks would remain unchanged.

The split offer, however, would be void without at least two-thirds of existing shares being tendered, and thrifts faced a November 30 deadline to agree to exchange their preferred shares in the split. If the deal was tendered, thrifts would able to realize a capital gain on their undervalued stock, which at the time of announcement, was projected to free $1 billion of new funds for the S&L industry, which had seen its capital levels diminish considerably over the previous few years (The New York Times (7/14/1988)).

Within a week of the November deadline, a majority of thrifts had yet to exchange their shares, as they were delaying the $7 per share payment until the last possible minute to preserve cash (The American Banker (11/22/1988)). But in the end, nearly all of the thrifts' preferred stock was exchanged in the split, the cash contributions from which added $104 million to Freddie's capital base (Treasury (1990), p. B-9). Preferred shares began publicly trading on January 3, 1989.

While the FHLBB imposed no statutory leverage or capital requirement on Freddie, their regulator kept mortgage holdings and operations aligned with what they deemed prudent capitalization, and portfolio expansion had been curbed earlier in the decade until more capital was raised (see Preferred Stock Authorization (Pub. L. 97-289) above). Assuming FHLMC's Board was keeping operations roughly in line with the 14.6-to-1 ratio of total liabilities to the primary capital base of $1.516 billion in 1987, the addition of $104 million in paid in capital would have enabled an

increase in liabilities and purchases of $1.52 billion ($104 million $\times$ (14.6 +1) = $1.62 billion), which we assign for the year starting in November 1988.[72] The ratio of total liabilities to the primary capital base was a comparable 16.3-to-1 and 15.4-to-1 in 1986 and 1988, respectively (FHLMC 1988 Annual Report, p. 24). And Freddie's primary capital base increased to $1.976 billion at the close of 1988, after the paid in capital increase, up 30.3% from 1987—well above the 23.1% increase in either the prior year or average increase of the prior three years.

The Federal Reserve's Annual Report for 1988 noted that "*The spread between interest rates on fixed-rate mortgages, which have an average life of roughly 10 years, and yields on 10-year Treasury notes did not change appreciably over 1988, which also indicates that the mortgage markets continued functioning well despite the problems of many savings and loan associations.*" (Annual Report of the Federal Reserve 1988, p. 17). The report also noted that housing investment had picked up in the second half of the year, and was up in the year to 1988Q4 (Annual Report of the Federal Reserve Board 1988, p. 7). We classify the policy change as motivated by political preferences for privatization as well as to address a long-standing, widely acknowledged constraint imposed by Freddie's statutorily restricted access to equity, and unrelated to the business or financial cycle.

Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (Pub. L. 101-73)
Enacted: August 9, 1989
See listing under FNMA (Sec. 4.1) for a broader overview of the Act and its historical context.

FIRREA rechartered Freddie and, for the first time, set its statutory purpose: "*(1) to provide stability in the secondary market for home mortgages; (2) to respond appropriately to the private capital markets; and (3) to provide ongoing assistance to the secondary market for home mortgages (including mortgages securing housing for low- and moderate-income families involving a reasonable economic return to the corporation) by increasing the liquidity of mortgage investments and improving the distribution of investment capital available for home mortgage financing*" (Sec. 731a). Freddie's mission had not previously extended to explicitly supporting housing for low- and moderate-income families. Congress simultaneously made conforming changes to the FNMA Charter Act, so that the Fannie and Freddie had identical statutory purposes. Of particular note, Congress's emphasis for both GSEs shifted to "ongoing assistance" to the secondary market, signaling a continuous presence in the secondary mortgage market.

In harmonizing the special privileges and statutory treatment of Fannie and Freddie, the Act additionally amended Section 305 of the FHLMC Act to allow the Treasury Secretary to purchase up to $2.25 billion worth of Freddie Mac's obligations. As with Fannie, this line of credit was perceived as an implicit government guarantee, lowering their cost of funds.

The Act turned FHLMC into a fully publicly traded shareholder-owned corporation. The law automatically converted Freddie Mac's senior participating preferred stock into voting, freely transferable common stock, effective August 9, 1989. Common stock began trading on the NYSE the following day. The conversion did not affect the amount of Freddie Mac's capitalization. The old Board of Directors, which consisted of the FHLBB members, was dissolved and replaced by a new 18-person Board of Directors, five of whom were to be appointed by the President

[72]The primary capital base was defined as reserve losses on mortgages, participating preferred stock, voting and nonvoting common stock, stained earnings, and additional paid in capital, but excluding subordinated borrowings. Alternatively using the ratio of liabilities to stockholder's equity of 20.72 at the end of 1987 (Treasury (1990), p. B-8), the implied maximum growth in mortgage assets from this capital injection would be $2.26 billion ($104 million $\times$ (20.72 +1) = $2.258 billion). A comparable ratio of liabilities to stockholder's equity of 20.69 prevailed at the end of 1988.

and the remainder of whom would be elected by the voting common shareholders.[73]

FIRREA transferred regulatory oversight of FHLMC from the FHLBB, which was also disbanded by the Act, to HUD, whose regulatory authority over Freddie Mac was similar to its existing authority over Fannie Mae. HUD could determine the ratio of unsecured debt to total regulatory capital, which was statutorily set to no less then 15-to-1, and could require that a reasonable portion of Freddie's mortgage purchases be related to national housing goals, providing they allowed for a reasonable economic return to Freddie. As was the case for Fannie, regulatory capital included subordinated debt. In 1989, the debt-to-capital ratio was only 4.25-to-1, because only a small volume of assets were funded by unsecured debt and because the capital ratio calculation excluded PCs, treated as off-balance sheet securities. The Act additionally required HUD's approval for the issuance of stock and securities convertible into stock.

It was clear that HUD's capital requirement did not constrain Freddie in any way (Treasury (1990), p. B-60). We therefore do not classify the imposition of this leverage requirement as a binding significant policy change materially affecting Freddie's mortgage portfolio when enacted.

Prior to FIRREA, Freddie maintained a relatively small amount of mortgages in portfolio for inventory purposes and securitized almost all of its purchases. As it was indirectly owned by the thrifts, this sufficed to accomplish the mission of providing secondary market liquidity. The change in ownership structure in 1989, however, created strong profit incentives to exploit the advantages of government sponsorship and a perceived implicit guarantee through leveraged portfolio growth (Treasury (1996), p. 39). On February 6, 1990, one of the first actions taken by the new Board was to retire at par the nonvoting common stock held by the FHLBanks, further severing Freddie's ties with the FHLBS (FHLMC Annual Report 1990, p. 44, Treasury (1990), p. B-9). The business models of Fannie and Freddie subsequently converged towards expanding securitization fee income coupled with highly leveraged retained portfolio growth.

Federal Housing Enterprises Financial Safety and Soundness Act of 1992 (Pub. L. 102-550)

Enacted: October 28, 1992

See listing under FNMA (Sec. 4.1) for a broader overview of the Act and its historical context.

Policy Change	Agency	Impact	News	Effective	Classification
Affordable Housing Goals	FHLMC	+$0.75 billion	July 1991	Jan. 1993	Non-Cyclical

The Act created OFHEO as the safety and soundness regulator of Fannie and Freddie, imposed uniform capital requirements, and broadened their statements of purpose to strengthen affordable housing activities. FHLMC's charter was changed from providing stability in secondary market for "home" mortgages to "residential" mortgages, thus expanding emphasis on (lower-income) multifamily housing. One of the main provisions of FHEFSSA affecting Fannie and Freddie was the introduction new capital requirements and requirement that OFHEO develop of risk-based capital standards based on stress tests. As with Fannie, Freddie anticipated the new capital requirements (see discussion under FNMA, Sec. 4.1). For instance, Freddie's 1990 Annual Report stated that "*Congress and certain federal agencies are considering actions that could result in the imposition of capital standards and other regulatory requirements on Freddie Mac. Legislation may be enacted or regulatory requirements may be adopted in 1991*" (FHLMC Annual Report

[73] An interim Board consisting of the President of the Corporation, outgoing FHLBB Chairman, and HUD Secretary were to serve until the first meeting of voting common shareholders.

1990, p. 24). But regulators had deemed that Freddie's capital position was significantly stronger than Fannie's, and there was no discernible effort by Freddie to recapitalize in anticipation of pending regulations, unlike Fannie.

HUD had not previously extended national housing goals to Freddie Mac (GAO (1996), p. 82), but the Act introduced quantitative affordable housing goals for Freddie. As mission regulator, HUD was required to set goals for: (1) low- and moderate-income housing; (2) housing in central cities rural areas and other underserved areas; and (3) special affordable housing for low- and very low-income families. During a two-year transition period starting from enactment, FHEFSSA set interim targets for each of the first two goals equal to 30% of the total number of units financed. Thereafter the HUD secretary was authorized to set annual goals, which could be higher or lower than the interim targets. Under the additional special affordable housing goal, Freddie was obliged to purchase an additional $1.5 billion of mortgages financing housing for low- and very-low income families during 1993 and 1994 combined, split between single and multifamily housing loans. Given that Freddie had completely stopped purchasing multifamily mortgages in 1989, these affordable housing goals clearly would have been binding if made effective upon enactment (see above). Splitting the $1.5 billion goal between the two years, we assign an annualized increase of $750 million to Freddie's purchase activity in January 1993.

The special affordable hosing goals enacted in October 1992 and made effective in January 1993, however, had long been anticipated, and were backed by both Fannie and Freddie in July 1991, when the GSEs negotiated them with housing public interest groups (see discussion under FNMA, Sec. 4.1). The original bill that evolved into FHEFSSA, which first introduced statutory affordable housing goals as a percentage of paid dividends, was introduced in the House on July 16, 1991, and the eventually enacted $1.5 billion transition compromise for Freddie was substituted in during a subcommittee markup on July 30. In response to the introduction and early evolution of the GSE oversight bill, Freddie's common shares fell 1.71% on July 16, 1991, for a negative excess return of 1.49 percentage points below the S&P 500 for the day. This movement reversed around the subcommittee markup, with Freddie's shares rising 1.77% on July 30 and 3.33% on July 31, for excess returns of 0.85 percentage points and 3.04 percentage points, respectively.[74] We thus date the news of the transition affordable housing goals to July 1991, rendering the policy as anticipated too far in advance of taking affect to be used as a policy instrument.

HUD published slightly revised interim housing goals for FHLMC in July 1993, which were published essentially unchanged as a final rule on October 13, 1993. The special affordable housing goal was set at $1.5 billion *above* Freddie Mac's existing performance and commitments for the 1993-1994 period. The goals with respect to low- and moderate-income housing were 28% for 1993 and 30% for 1994 (The American Banker (10/14/1993)). For housing located in central cities, the goals were 26% and 30% for 1993 and 1994, respectively. Freddie Mac's goals were set lower than Fannie Mae's, again because it had ceased purchasing multifamily mortgages a few years earlier, and was thus equipped to finance fewer of those units than Fannie Mae.[75] Freddie Mac estimated that it purchased $5.214 billion of mortgages in 1992 that would have qualified toward the special affordable housing goal, had it applied. The 1993-1994 special affordable housing goal for Freddie Mac was then established as twice the 1992 baseline ($10.428 billion) plus $1.5 billion for a two-year goal of $11.928 billion (58 FR 53072).

On November 30, 1994, HUD temporarily extended the affordable housing goals for 1994 into 1995. The 1995

[74]We were unable to discern wether the leader's amendment was adopted before or after the closing bell on July 30, 1991.

[75]It had become clear by the end of 1989 that Freddie's multifamily mortgage portfolio's credit performance was in bad and deteriorating shape, and these loans started to raise red flags, despite accounting for just 3% of its total servicing portfolio. After first tightening underwriting standards, mortgages purchases under Multifamily Cash Program purchases were completely suspended in September 1990 (FHMLC Annual Report 1990, pp. 18-19).

goal for special affordable housing purchases for Freddie Mac was set at $3.357 billion for 1995, $750 million above the revised baseline (59 FR 61504). The lower special affordable housing goal was meant to recognize that the dollar amount of conventional mortgages originated was expected to be substantially lower in 1995 than the volume of originations in 1992. The goals applied on a proportional basis for that portion of 1995 before permanent goals were established. The lower 1995 goal was therefore entirely due to changes in mortgage market conditions rather than policy, and we therefore do not record any change in purchase activity as a result of the extension of the interim goals.

HUD Final Rule on Housing Goals Issued: December 1, 1995

See listing under FNMA (Sec. 4.1) for a broader overview of the revised housing goals.

Policy Change	Agency	Impact	News	Effective	Classification
Multifamily Housing Goals	FHLMC	+$0.61 billion	Dec. 1995	Jan. 1996	Non-Cyclical

On December 1, 1995, HUD issued new housing goals for 1996 through 1999. Freddie Mac had met HUD's headline housing goals throughout 1993-1995, but by much narrower margins than Fannie Mae. Freddie's relative struggles with the new goals was largely attributed to Fannie's larger presence in the multifamily mortgage market (GAO (1998)).[76] But Freddie Mac missed its $750 million multifamily portion of the special affordable housing goal for 1993 and 1994, when it purchased just $495 million worth of qualifying multifamily mortgages (FHLMC Annual Report 1995, p. 31). Freddie also missed another HUD goal for the fraction of purchases for mortgages in central cities in both 1993 and 1994 (The American Banker (3/9/1995)). Freddie tried to compensate for these shortfalls in 1995, purchasing nearly $1 billion in multifamily mortgages, eclipsing that year's $375 million special affordable goal.

But HUD's new special affordable goals set a considerably higher multifamily mortgage purchases goal of $988 million—set based on 0.8% of Freddie's total purchases for 1994—annually from 1996 through 1999. Given Freddie's challenges meeting the multifamily and central cities subgoals, we deem this large increase a significant policy change that would have affected Freddie's purchase behavior. We assign an annualized increase in purchases of $613 million in January 1996, scored as the difference between Freddie's multifamily special affordable housing goals for 1995 and 1996.

Ex ante, Freddie was just barely able to meet its higher multifamily special affordable housing subgoals, whereas Fannie hit roughly twice its higher multifamily targets (GAO (1998), p. 18). And unlike Fannie, it is clear that Freddie had to change its purchase behavior to accommodate the multifamily goals, most notably reinstating its halted purchase program in 1993, and not all of its resumed multifamily purchases qualified as meeting the special affordable housing goals.

The Fed's 1995 Annual Report also noted that Fannie and Freddie had recently "*initiated a variety of affordable home loan programs intended to benefit lower-income and minority households and neighborhoods*" and impacts of affordable housing goals appeared to be showing up in Home Mortgage Disclosure Act microdata: "*A year-to-year comparison of the HMDA data suggests that these programs may be making a difference. From 1992 to 1993 the number of conventional home purchase loans extended to lower-income borrowers increased 38 percent compared*

[76]After suffering large losses in the late 1980s, Freddie completely withdrew from the multifamily market in 1990, and only returned to the market in 1993 to satisfy the affordable housing goals (FHLMC Annual Report 1992, p. 34).

with an 8 percent increase for higher-income homebuyers. The trend continued into 1994. The 1994 HMDA data show that the number of loans to lower-income borrowers increased about 27 percent while the number extended to higher income borrowers increased about 13 percent... Among racial or ethnic groups from 1993 to 1994, the number of loans to black applicants increased 55 percent, to Hispanic applicants 42 percent, and to Asian applicants 19 percent. The increase for white applicants was 16 percent over the same period." (Annual Report of the Federal Reserve Board 1995, p. 203). Again this suggests that the affordable housing goals substantially altered the purchasing behavior of Fannie and Freddie.

The tightening of affordable housing goals for 1996 was ostensibly about social policy objectives promoting home-ownership and housing for lower-income households. The implementation of new goals was also long required by the FHEFSSA of 1992, rather than an unexpected development stemming from housing market or financial conditions. The Federal Board's Annual Report for 1995 noted that, shaped by mortgage rate fluctuations,"*residential investment fell in the first half of 1995 but turned up in the second half... [but] the intra-year swings in the various housing indicators left the annual totals for these indicators at fairly elevated levels. Sales of existing homes in 1995 were well above the annual average for the 1980s, even after adjusting for increases in the stock of houses*" (Annual Report of the Federal Reserve Board 1995, p. 9). We thus classify the change as primarily motivated by social policy objectives and unrelated to the business or financial cycle.

New HUD Regulations on Housing Goals Issued: October 31, 2000

See listing under FNMA (Sec. 4.1) for a broader overview of the revised housing goals.

Policy Change	Agency	Impact	News	Effective	Classification
Affordable Housing Goals	FHLMC	+$24.4 billion	July 1999	Jan. 2001	Non-Cyclical

On October 31, 2000, HUD published a final rule significantly increasing affordable housing goals for 2001-2003 for both Fannie Mae and Freddie Mac, which were virtually identical to a new proposed affordable housing policy outlined by the HUD Secretary on July 29, 1999. We assign the same $24.4 billion annualized increase in purchases for Freddie as assigned to Fannie (see listing under FNMA, Sec. 4.1). Financial markets appeared to react to new information revealed with both the proposed rule and final rule publication. News of the proposed affordable housing policy leaked on July 28, 1999, after HUD announced a scheduled press conference with Secretary Cuomo and Fannie Chairman Barnes the following day. Freddie's share price fell 0.63% that day, 0.82 percentage points below the S&P 500's gain for the day, despite better-than-expected second quarter earnings results. Shares rebounded 0.74% the next day, closing 2.52 percentage points above the S&P 500, after Freddie "balked" and lodged a formal complaint against HUD's proposed affordable housing goals, citing concerns about the size of the increase as well as Freddie's disadvantaged position with respect to its multifamily housing program, which was a quarter the size of Fannie's (Dow Jones News Service (7/29/1999)); Freddie announced it would submit detailed detailed objections during the comment period of the proposed rule.[77] When the proposed rule was detailed on March 2, 2000, Freddie's stock price fell 3.32%, for a negative excess return of -3.51 percentage points below the S&P 500. Freddie's share price fell 0.83% upon the

[77] Intriguingly, Freddie's management claimed in the 1999 Annual Report that adoption of the proposed rule "*would not have a material adverse effect on Freddie Mac's results of operations or financial condition*," although this could have been an attempt to manage shareholder sentiment (FHLMC Annual Report 1999, p. 42).

announcement of the final rule on October 31, 2000, for a negative excess return of 3.02 percentage points below the return on the S&P 500.

We classify the policy change as unrelated to the business cycle (see the listing under FNMA, Sec. 4.1). The implications of the proposed rules and Freddie's unsuccessful efforts to water them down appear to have been gradually priced into Freddie's shares starting in July 1999, more than a year before the eventual rules were made effective in January 2001. We thus classify the imposition of affordable housing goals as a significant policy change but as anticipated too far in advance of taking effect to be used as a policy instrument on a consistent basis with policy changes taking effect closer to announcement.

OFHEO Ruling on Capital Requirements Issued: September 13, 2001

Pursuant to FIRREA, OFHEO gradually developed "stress-test" risk-based capital rules, which were issued in September 2001, to be made effective September 13, 2002. But Fannie Mae and Freddie Mac both maintained capital well in excess of the regulatory risk-based capital standard until mid-2008, so we do not consider this to be a significant policy change affecting the Enterprises' purchase or portfolio behavior. See listing under FNMA (Sec. 4.1) for background and context.

SEC Disclosure Requirements Agreement: July 12, 2002

On July 12, 2002, Fannie and Freddie agreed to register their common stock with the SEC and "voluntarily" comply with SEC disclosure requirements, preempting legislative action on a bill to requiring them to do so. We do not consider this to be a significant policy change affecting the Enterprises' purchase or portfolio behavior. See listing under FNMA (Sec. 4.1) for background and context.

Accounting Scandal: Capital Surcharge Announced: January 29, 2004

Allegations of accounting irregularities at Freddie Mac emerged in 2002. On January 22, 2003, Freddie announced that accounting policies related to hedging treatment employed by its previous external auditor, Arthur Anderson, necessitated restating financial results for 2001 and 2002, and possibly 2000. On June 7, 2003, OFHEO launched a special examination into the accounting irregularities. On October 23, 2003, Freddie's president was terminated for due cause. On November 21, 2003 the company restated financial results, which led to a $5 billion increase in cumulative retained earnings and $5.2 billion increase in core capital (OFHEO (2003), p. 1). OFHEO released its special examination report on December 10, 2003 and Freddie agreed to pay a $125 million penalty for inappropriate conduct and improper management of earnings. The report concluded that Freddie Mac had disregarded accounting rules, internal controls, and disclosure standards, and ultimately violated the public trust in its pursuit of steady earnings growth. The report also stated that Freddie had used a number of strategies in an effort to shift earnings among quarters and years, so as to achieve stable growth in earnings per share. The report recommended that Freddie be required to hold a capital surplus and urged consideration of limiting retained portfolio growth until Freddie Mac produced certified financial statements.

On January 29, 2004, OFHEO imposed a capital surcharge of 30% above the minimum capital surplus in response to increased operational risk. The surcharge requirement was effective immediately and would remain in place until timely, certified financial statements were produced. The order also mandated OFHEO's approval for any corporate action that might impair Freddie's ability to achieve the targeted capital surplus. In the news release announcing the

surcharge, OFHEO reported a capital surplus as of November 30, 2003 of $8.1 billion, 32.2% above the statutory minimum requirement (OFHEO (2004d)). The surplus for November 30, 2003 did not reflect pending 2003 financial statement adjustments, but did reflect the increase in capital of approximately $5 billion from the 2002 restatement process. Freddie's 2004 Annual Report reported core capital of $35.0 billion as of December 31, 2004, $10.9 billion in excess of the minimum statuary capital requirement, and approximately $3.6 billion in excess of the amount required with the 30% capital surcharge (FHLMC Annual Report 2004, pp. 22, 89). The capital surplus grew by $1.7 billion (year-over-year) because of higher retained earnings, a slight contraction in Freddie's balance sheet, and minimal growth in off-balance sheet MBS obligations in 2004.

Because the restatement of recent earnings resulted in an increase in core capital—unrelated to any policy change—to levels well exceeding the amounts newly required by the capital surcharge and no portfolio adjustments were needed, we do not classify the imposition of the capital surcharge as a significant policy change expected to impact Freddie's retained portfolio.

New HUD Regulations on Housing Goals Issued: November 1, 2004.
See listing under FNMA (Sec. 4.1) for a broader overview of the revised housing goals.

Policy Change	Agency	Impact	News	Effective	Classification
Affordable Housing Goals	FHLMC	+$7.6 billion	Apr. 2004	Jan. 2005	Non-Cyclical

Affordable housing goals came up for renewal in 2004; in April, HUD proposed more aggressive rules for 2005 through 2008, and published slightly scaled back increased goals in November. The final rules, issued in November, were quite similar to the rules proposed in April (see discussion under FNMA, Sec. 4.1). There is abundant evidence that this round of affordable housing goal increases began to substantially alter the Enterprises' purchase and portfolio behavior (FCIC (2011), pp. 186-187). Freddie's 2004 Annual Report stated that "*We believe that meeting these goals and subgoals will be challenging and there can be no assurance that we will meet all of them in 2005 or beyond. We are making significant efforts to meet the new goals and subgoals through adjustments to our mortgage sourcing and purchase strategies, including changes to our underwriting guidelines and expanded and targeted initiatives to reach underserved populations.*" (FHLMC Annual Report 2004, p. 11). Despite a warning that the goals could reduce profitability, Freddie reiterated its support for the affordable housing component of its public mission: "*We view the purchase of mortgage loans benefitting low- and moderate-income families and neighborhoods as a principal part of our mission and business, and remain committed to fulfilling the needs of these borrowers and markets.*" The 2006 Annual Report similarly emphasized that: "*We are making certain changes to our business to meet HUD's housing goals and subgoals, which may adversely affect our profitability. We are purchasing loans and mortgage-related securities that offer lower expected returns on our investment and increase our exposure to credit losses.*" (FHLMC Annual Report 2006, p. 13). We assign the same impact to Freddie as to Fannie, an annualized increase in purchases of $7.6 billion for the first year of operation (see discussion in listing under FNMA, Sec. 4.1).

Freddie Mac retroactively estimated that there was zero cost to meeting its affordable housing goals over 2000 through 2003, when goals were met through "*profitable expansion*", but goals became harder to meet as the refinancing boom increased the share of non-qualifying mortgage originations (FCIC (2011), p. 186). Freddie estimated that over 2005 through 2008, roughly 4% of loan purchases, or roughly $31.4 billion, were made "*specifically because they*

contribute to the goals," suggesting that the goals issued in 2004 forced Freddie to alter and expand its purchasing behavior. The costs associated with carrying such loans were estimated to average $200 million annually over 2003 through 2008 (FCIC (2011), p. 186), again suggesting real portfolio effects from the affordable housing goals.

When the proposed goals were leaked in early April, Freddie's shares fell 0.43% on April 6, 2004, closing 0.22 percentage points below the S&P 500 for the day. Freddie's stock price rose 0.08% on November 1 and 0.86% on November 2 on leaked news of the final rule and its publication in the Federal Register, respectively, closing 0.05 percentage points and 0.88 percentage points above the S&P 500 those days. The final rule's one percentage point reduction across the three goals, relative to the proposed rule, was received positively, although the response to shares may have been muted by speculation about the imminent presidential election.[78] Given the similarity of the final rule to the proposed rule, and markets' initial pricing of the more aggressive rules, we date the news component of the housing goals as April 2004, as with Fannie. Given that the rules became effective January 1, 2005, within nine months of the initial rules being published, we consider this a significant policy change that was not anticipated too far in advance to be used as an instrument consistent with other significant policy changes.

As with Fannie, we classify the affordable housing goals as driven by social policy objectives as well as a long-standing legal requirement set by FHEFSSA, and unrelated to business cycle and financial concerns (see listing under FNMA, Sec. 4.1, for an explanation for this classification).

OFHEO-SEC-Freddie Settlement: Portfolio Growth Limit Announced: August 1, 2006

Policy Change	Agency	Impact	News	Effective	Classification
Portfolio Growth Limit Imposed	FHLMC	-$42.8 billion	June 2006	July 2006	Non-Cyclical

Throughout 2005 and 2006, political pressure built to reign in Fannie and Freddie, particularly by curbing the GSEs' retained portfolios.[79] In a May 2005 speech to the Conference on Housing, Mortgage Finance, and the Macroeconomy at the Federal Reserve Bank of Atlanta, Federal Reserve Chairman Alan Greenspan was highly critical of the GSEs' balance sheet expansion and encouraged portfolio limits: "*The Federal Reserve Board has been unable to find any credible purpose for the huge balance sheets built by Fannie and Freddie other than the creation of profit through the exploitation of the market-granted subsidy. Fannie's and Freddie's purchases of their own or each other's mortgage backed securities with their market-subsidized debt do not contribute usefully to mortgage market liquidity, to the enhancement of capital markets in the United States, or to the lowering of mortgage rates for homeowners*" (Greenspan (2005)).

Coinciding with the May 2006 release of OFHEO's final report investigating Fannie Mae's accounting scandal, Fannie entered an agreement with OFHEO and the SEC that included capping its retained portfolio at its value from the end of 2005.[80] In response to a request by OFHEO, Freddie announced on August 1, 2006 that it would voluntarily and temporarily limit the growth of its retained portfolio to no more than than 2.0% annually (and 0.5% each quarter) above the $710.3 billion portfolio as of June 30, 2006, as measured by GAAP accounting rules. Freddie's 2006 Annual

[78]The following day shares fell 1.86%, 2.98 percentage points below the return on the S&P 500, with the skid was attributed to President Bush winning reelection and Republican gains in the House and Senate the evening of November 2nd, perceived as increasing the odds of GSE reforms and diminishing political favor (Reuters (11/3/2004))

[79]See Accounting Scandal: Capital Shortfall and Surcharge under Sec. 4.1.

[80]See OFHEO-SEC-Fannie Settlement: Portfolio Caps under FNMA, Sec. 4.1.

Report stated: "*We expect to keep the limit in place until we return to producing and publicly releasing quarterly financial statements prepared in conformity with U.S. generally accepted accounting principles*" (FHLMC Annual Report 2006, p. 4). Permissible portfolio growth was additionally limited to "*assets that are intended to help [Freddie] meet [their] affordable housing goals or subgoals*," particularly multifamily whole loans, private-label MBS, and commercial MBS (The American Banker (8/2/2006)). The limit was made retroactively effective July 1, 2006.

Prior to the consent agreement, Freddie had "*stated that it will grow in line with the growth rate of the overall MBS (mortgage-backed securities) market*" according to a market analyst (Dow Jones News Wire (5/24/2006)). To measure the impact of the the portfolio caps, we rely on the June 21, 2006 Greenbook forecast of 9.5%, 8.4%, and 7.1% annualized growth rates for U.S mortgage debt for 2006Q3, 2006Q4, and 2007, respectively. Applying these growth rates to a retained portfolio of $710.3 billion as of June 30, 2006 suggests mortgage portfolio growth of $31.1 billion in the second half of 2006 and another $25.9 billion in the first half of 2007 without the caps imposition. With the annual 2% portfolio growth cap, the maximum permissible portfolio expansion would have been $14.2 billion in the year from June 30, 2006. Annualizing, we assign a projected portfolio contraction of $42.8 billion in July 2006 (14.2 - (31.1 + 25.9) = 42.8).

The imposition of portfolio caps had been anticipated well before Freddie announced the portfolio caps. Freddie had reduced its mortgage portfolio in both May and June 2006, slowing annualized growth for the first half of the year to 3.4%, down from 8.4% portfolio growth in 2005, although this deceleration was only made public in late June (The American Banker (6/25/2006)). By stark contrast, its retained portfolio had grown at annualized rates of 17.2% and 14.0% in March and April, respectively (Dow Jones News Wire (5/24/2006)).[81] In a conference call with shareholders about its reported 2005 net earnings, after markets had closed on May 30, Freddie's CEO Syron announced that the corporation expected to be in talks with OFHEO about the possibility of portfolio limits, adding that Freddie had "*not started to think about ways we would adapt to the hypothetical*" possibility of portfolio limits (Dow Jones Newswires (5/30/2006)).[82] On June 6, *The Wall Street Journal* reported that "*Freddie Mac may face limits on its holdings of mortgage loans and related securities*" (The Wall Street Journal (6/5/2006)). In testimony that day before a House Financial Services subcommittee, OFHEO Director Lockhart flagged that the "*chairman of Freddie Mac mentioned that, I believe last week, in a press conference he did mention that we have discussed the idea that there* ***should be some sort of freeze*** *there as well*" and that a consent agreement was possible, but would require Freddie's voluntary agreement. Lockhart also claimed that Freddie was at least two years away from "*having acceptable accounting and internal controls and a risk management system.*" Shares of Freddie fell 3.31% for the day, for a negative excess return of 3.2 percentage points below the daily return on the S&P 500. Shares had also fallen 2.5% on May 31, for a negative excess excess return of 3.31 percentage points below the S&P 500, as markets priced in both disappointing 2005 earnings results and CEO Syron's warning about the potential for portfolio caps.

In mid-June, the Treasury Department publicly announced that it was reviewing its process for approving Fannie and Freddie debt issuance requests, which was widely interpreted as a threat by the Bush administration that it would unilaterally limit the GSEs' portfolios if Congress or OFHEO did not act (The Wall Street Journal (6/14/2006)). On

[81]These growth rates are based on the non-seasonally adjusted portfolio data reported at the time. Ex post, seasonally adjusted data show a similar decline form annualized growth rates slightly above 10% in March and April to portfolio contractions of 7.6% and 3.3%, respectively, in May and June.

[82]Syron stated that: "*[OFHEO Director] Lockhart has indicated that he intends to consider whether additional remedial actions may be appropriately applied to Freddie Mac while we continue to fix our control environment, and this could include consideration of portfolio growth limitations for some period of time*" (National Mortgage News (6/5/2006)).

June 27, Freddie announced that it had reduced its retained portfolio in May, which was characterized at the time as "*a clear departure from April, when the housing-finance agency grew its portfolio by an annualized rate of 14.0%*" (Dow Jones Newswires (6/27/2006)). Dow Jones Newswires reported that the move was likely intended to avoid irking OFHEO, and that since the regulator's imposition of portfolio limits on Fannie in late May, "*market participants have speculated that similar constraints might be placed on Freddie, or that Freddie might voluntarily impose them on itself*" (Dow Jones Newswires (6/27/2006)). In early July, *The Wall Street Journal* reported that OFHEO Director Lockhart would like to see the Enterprises maintain a countercyclical role yet be shrunk to a 'smaller scaler,' and that "*Mr. Lockhart appears likely to impose a similar restraint on Freddie*" as they did Fannie (The Wall Street Journal (7/5/2006)). On July 7, an interview with Lockhart published by *The American Banker* reported that "*Freddie would agree soon to cap its mortgage portfolio*," and that a deal was expected within the next three weeks (The American Banker (7/7/2006)). While the *American Banker* interview was re-reported in a number of outlets that day, shares of Freddie fell only 0.12%, outperforming the S&P 500 by 0.55 percentage points for the day, suggesting that the expectation of portfolio caps for Freddie had already been priced in. Upon the announcement of the portfolio caps on August 1, Freddie's share price fell only 0.57%, underperforming the S&P 500 by just 0.12 percentage points for the day. And *Dow Jones Newswires* reported that day that the announcement of portfolio limits "*was widely anticipated and had little impact on valuations of the debt it uses to fund its purchases*" (Dow Jones News Wire (8/1/2006)).

Consequently we date the expectation of portfolio caps as being made public in June 2006, when the news of looming caps seemed to be priced into Freddie's shares. The Federal Reserve Board's 2006 Annual Report noted that "*the housing market cooled substantially*" in 2006, and was dampening overall economic activity (Annual Report of the Federal Reserve Board 2006, p. 3). But we find no evidence that the imposition of portfolio caps was motivated by trying to further cool housing market activity. Instead we classify the imposition of Freddie's portfolio caps as motivated by long-standing partisan and policy objections to the GSEs' portfolio growth, particularly by the current administration and Federal Reserve, and unrelated to the business cycle.

OFHEO Relaxes Portfolio Caps Announced: September 19, 2007

See listing under FNMA (Sec. 4.1) for economic and regulatory context.

Policy Change	Agency	Impact	News	Effective	Classification
Portfolio Limits Relaxed	FHLMC	+$2.14 billion	Sep. 2007	Sep. 2007	Cyclical

On September 19, 2007, OFHEO announced changes to its methodology for calculating the mortgage portfolio cap in order to provide both Fannie and Freddie greater flexibility in managing market-based fluctuations in an increasingly volatile market. The new agreement increased FHLMC's baseline for the retained portfolio cap to $735 billion in UPB at the end of 2007Q3, revised upward from a $728.1 billion GAAP portfolio limit in place under the previous agreement (OFHEO (2007)). The 2.0% annual growth limit and 0.5% quarterly growth rate limits were maintained for Freddie and extended to Fannie, which had previously faced a flat nominal limit. As with Fannie, the changes were intended to encourage Freddie to purchase or securitize up to $20 billion in subprime loans in the short run. The maximum permissible 2% growth rate would allow up to a portfolio of $749.7 billion in 2008Q3 from the revised $735 billion cap measurement for 2007Q3.

The OFHEO press release explained that "*UPB often exceeds the GAAP value for the Enterprises. Due to market fluctuations over the first seven months of 2007, this difference has ranged from $0.1 billion to $9.4 billion*" (Market News International (2007)). Fannie's Monthly Volume Surveys for August and September 2007 both suggested that their retained portfolio was roughly $4.8 billion higher measured on a UPB basis rather than a GAAP basis (see listing under FNMA, Sec. 4.1). In scoring the policy change, we add this difference to the $728.1 billion portfolio limit based on GAAP as a baseline limit measured in UPB. Assuming the caps were binding constraints, we assign an annualized increase in Freddie's potential purchases of $2.14 billion in the year starting September 2007 ($749.7 - 1.02 \times (728.1 + 4.8) = 2.14$). Given the 'short run' emphasis and stated goal of purchasing a higher $20 billion in subprime mortgage securities, we do not invoke the two-year rule.

Freddie's share price rose 2.76% on September 19, a gain 2.15 percentage points above that of the S&P 500 for the day. As with Fannie, we classify the relaxation of portfolio caps as driven by cyclical financial concerns (see listing under FNMA, Sec. 4.1, for a more detailed discussion of this classification).

Economic Stimulus Act of 2008 (Pub.L. 110-185) Enacted: February 13, 2008

See listing under FNMA (Sec. 4.1) for economic context and legislative background.

Policy Change	Agency	Impact	News	Effective	Classification
Jumbo Conforming Loan Limit	FHLMC	+$41.57 billion	Feb. 2008	Feb. 2008	Cyclical

The Act increased the conforming loan limit in high cost areas from $417,000 to up to $729,750, the so-called 'super-conforming loan limit.' We estimate that the increase in the conforming loan limit increased the GSEs' purchase capacity by $83.14 billion for 2008, which we split evenly between Fannie and Freddie. And as with Fannie, we classify this sizable increase in conforming loan limits as driven by cyclical financial concerns (see listing under FNMA, Sec. 4.1, for an overview of this scoring and classification).

OFHEO Reduces Capital Surcharge Announced: March, 19, 2008

See listing under FNMA (Sec. 4.1) for economic context and regulatory background.

Policy Change	Agency	Impact	News	Effective	Classification
Portfolio Limits Removed	FHLMC	+$9.05 billion	Feb. 2008	Mar. 2008	Non-Cyclical
Capital Requirements Reduced	FHLMC	+$43.33 billion	Mar. 2008	Mar. 2008	Cyclical

On February 27, 2008, OFHEO announced that the caps on the Enterprises' portfolios were being removed effective March 1, 2008; Fannie and Freddie had begun filing timely financial reports again, for the first time since the accounting scandals, which largely motivated the change (The New York Times (2/28/2008)). OFHEO also noted substantial progress made by both GSEs in reforming and improving internal systems and controls. Citing recent losses and market conditions, however, OFHEO initially retained the 30% capital surplus above the statutory minimum capital requirement, but noted that it would discuss phasing out the capital surcharges as their consent orders approached being lifted. In a quick reversal after the collapse of Bear Stearns, OFHEO, Fannie, and Freddie announced on March 19 an initiative to increase mortgage market liquidity, including a reduction in the capital surcharges from 30% to 20%

above the minimum statutory requirement which was intended to pump $200 billion into the housing market (OFHEO (2008)).

The decrease in the capital surcharge lowered Freddie's capital requirement from $34.4 billion to $31.8 billion, or $2.6 billion (The Washington Post (3/20/2008)). Made possible by the recent removal of the portfolio caps, OFHEO estimated that the combined reduction of about $5.9 billion would allow Fannie and Freddie to immediately add up to $200 billion of mortgage-backed securities to their portfolio, consistent with the a binding 3% minimum capital requirement. For FHLMC, the release of $2.6 billion in capital would thus expand their potential retained portfolio by $86.67 billion $\left(\frac{\$2.6}{0.03} = \$86.67\right)$. Using the two-year rule, we assign an annualized impact of $43.33 billion for Freddie's retained portfolio for the year starting March 2008 resulting from the capital surcharge reduction.

To assess the impact of the prior removal of the portfolio limits, we rely on the January 23, 2008 Greenbook forecast of 3.1% and 3.0% growth rates for U.S. mortgage debt for 2008 and 2009, respectively. Applying this growth rate to a retained portfolio of $710 billion at year end 2007 would suggest a projected mortgage portfolio increases of $7.8 billion for 2008 and $15.3 billion for 2009 in excess of the permitted 2% growth permitted before the removal of the portfolio limits.[83] Pro-rating growth between the two years, we assign a potential annualized increase in Freddie's retained portfolio of $9.05 billion in the year starting March 2008 from the portfolio cap's removal $\left(\$7.8 \times \frac{10}{12} + \$15.3 \times \frac{2}{12} = \$9.05\right)$.

On the announcement of the caps' removal, Freddie's stock price jumped in mid-day trading on February 27, gaining up to 17%; but shares closed down 0.48% for the day, or 0.38 percentage points below the daily return on the S&P 500, as markets priced in both OFHEO's move and worse-than-expected fourth quarter losses also posted by both Freddie and Fannie that day (Dow Jones Newswires (2/27/2008)). Shares rose 26.19% on speculation and news leaking about a reduction in the capital surcharge on March 18, gaining 21.95 percentage points more than the S&P 500, and another 14.91% on March 19th, 17.34 percentage points above the daily return on the S&P 500.

As with Fannie, we classify the removal of the portfolio caps as principally motivated by a standing regulatory commitment and not cyclically motivated, whereas we classify the subsequent reduction of capital surcharges as cyclically motivated (see listing under FNMA, Sec. 4.1, for a detailed discussion of this classification).

Provisional Fed Lending to Fannie and Freddie Announced: July 13, 2008

On July 13, 2008, the Federal Reserve Board of Governors authorized provisional lending to Fannie and Freddie if such lending proved necessary. No lending took place between this authorization and the Enterprises being taken into conservatorship on September 7, 2008 (see below).

Housing and Economic Recovery Act of 2008 (Pub. L 110-289) Enacted: July 30, 2008

See listing under FNMA (Sec. 4.1) for economic context and regulatory background.

Policy Change	Agency	Impact	News	Effective	Classification
Jumbo Conforming Loan Limit	FHLMC	-$13.34 billion	July 2008	Jan. 2009	Cyclical

The Act consolidated GSE oversight to the newly created FHFA. The Act also set a structure for conforming loan limits for the nation as a whole, as well as for high-cost areas, which would be annually indexed based on a home price

[83]For 2008, $\$710 \times (1.031 - 1.02) = \$7.8$. For 2009, $\$710 \times (1.031 \times 1.03 - 1.02^2) = \$15.3$.

indexed chosen and maintained by the FHFA director. The Act amended the Enterprises' charters to permanently set the national conforming loan limit at $417,000 and increase the conforming loan limit for high cost areas, defined as areas in which 115% of the median home price exceed the national conforming loan limit, setting super-conforming loan limits to the lesser of 115% of the area median home price or 150% of the conforming loan limit. The changes were effective December 31, 2008, when the ESA super-conforming loan limit expired.

On November 7, 2008, FHFA announced that the single family home conforming loan limit for most areas of the country would be kept at $417,000 for 2009, but the new formula reduced the maximum super-conforming loan limit to $625,500, down from $729,750 for 2008.

We estimate that roughly $26.68 billion in originations between the two super-conforming loan limits would have been acquired in 2009, and allocate half this potential portfolio decrease, or $13.34 billion, to Freddie for the year starting July 2008, when the structure of the new conforming loan limit formula was established by HERA. As with Fannie, we classify the policy change as cyclically motivated (see listing under FNMA, Sec. 4.1, for an overview of this scoring and classification).

FHFA Conservatorship Announced: September 7, 2008

See listing under FNMA (Sec. 4.1) for economic context and regulatory background.

Policy Change	Agency	Impact	News	Effective	Classification
Portfolio Limit Increase	FHLMC	+$66.75 billion	Sep. 2008	Sep. 2008	Cyclical

Fannie and Freddie were taken into government conservatorship by the Treasury Department and FHFA on September 7, 2008. Freddie Mac's Senior Preferred Stock Purchase Agreement with Treasury mirrored Fannie's (see above). Freddie's retained mortgage portfolio was not to exceed $850 billion as of December 31, 2009, with this limit subsequently to be reduced by 10% each year until reaching $250 billion in 2021.[84] We do not attempt to estimate the counterfactual evolution of the mortgage portfolio in the absence of the SPSPA agreement and simply measure the impact relative to the portfolio outstanding on August 30, 2008. On August 30, 2008, the total retained portfolio was approximately $761 billion, implying a maximum increase of $89 billion by the end of 2009, or an annualized $67.5 billion increase $\left(\$89 \times \frac{12}{16} = \$66.75\right)$, which we assign to September 2008. There is abundant evidence that regulators were strong-arming both Enterprises to markedly ramp up their purchases to provide additional liquidity to mortgage markets ahead of the portfolio cap reductions (see listing under FNMA, Sec. 4.1).

The announcement of conservatorship wiped out nearly all remaining stockholder equity, with shares having already fallen 91.5% in the year to September 5, 2008. When markets reopened on Monday, September 8, Freddie's share price fell 82.75%, to 88 cents, from previously closing at $5.1 per share. The possibility of conservatorship clearly had not been fully priced into Freddie's shares. Hereafter we largely cease reporting information about Freddie's share price, as its movements became highly volatile and rather uninformative after falling to penny stock status.

As with Fannie, we classify Freddie's placement into conservatorship as clearly cyclically motivated (see listing under FNMA, Sec. 4.1, for a more detailed discussion of context and this classification).

[84] The agreement implied a total portfolio reduction of $600 billion from 2009 to 2021, with annual declines of $85 billion in 2010 and $76.5 billion in 2011.

American Recovery and Reinvestment Act of 2009 (Pub. L. 111-5) Enacted: February 17, 2009
See listing under FNMA (Sec. 4.1) for economic context and regulatory background.

Policy Change	Agency	Impact	News	Effective	Classification
Jumbo Conforming Loan Limit	FHLMC	+$13.34 billion	Feb. 2009	Feb. 2009	Cyclical

Shortly after the FHFA announced the super-conforming loan limit for 2009 was being reduced to $625,500 pursuant to HERA, Congress intervened to statutorily reinstate the higher $729,750 maximum super-conforming loan limit set by ESA (see ESA, HERA above). ARRA re-established the higher loan limit for 2009, which was then twice extended through the end of fiscal year 2011 (Pub. L. 111-88, Pub. L. 111-242). We again estimate that roughly $26.68 billion in originations between the two super-conforming loan limits would have been acquired in 2009 (see HERA above), and allocate half this potential increase in retained portfolio purchases to Freddie for one year starting in February 2009.

As with Fannie, we classify the reinstatement of the higher super-conforming loan limit as cyclically motivated (see listing under FNMA, Sec. 4.1, for an overview of this scoring and classification).

Homeowner Affordability and Stability Plan Announced February 18, 2009
See listing under FNMA (Sec. 4.1) for economic context and regulatory background.

Policy Change	Agency	Impact	News	Effective	Classification
Portfolio Limit Increase	FHLMC	+$50 billion	Feb. 2009	May 2009	Cyclical

The Homeowner Affordability and Stability Plan, a set of initiatives to prop up the beleaguered housing market announced by the President, Treasury Secretary, and HUD Secretary on February 18, 2009, increased Freddie's portfolio cap for 2009 from $850 billion to $900 billion. The amendments to Freddie's SPSPA with the Treasury were identical to the amendments to Fannie's SPSPA (see FNMA, Sec. 4.1). We measure the impact of the SPSPA amendment as the difference in portfolio limits and mandated reductions before and after the amendment, assigning an annualized increase in Freddie's potential portfolio of $50 billion starting in February 2009.

As with Fannie, we classify the increase in Freddie's portfolio limit as clearly cyclically motivated (see listing under FNMA, Sec. 4.1, for an overview of this scoring and classification).

Enterprise Transition Affordable Housing Goals for 2009 Issued: August 10, 2009.
FHFA concluded that the affordable housing goals would not be achievable in 2009 for a variety of economic reasons, and thus lowered all three goals in addition to making the Enterprises' mortgages modified under the Homeowner Affordability and Stability Plan count toward the goals. We assign no related impact. See listing under FNMA (Sec. 4.1) for economic and regulatory context.

Second Amendment to Senior Stock Purchase Agreement December 24, 2009
The Treasury Department replaced Freddie's $200 billion funding line with an unlimited commitment, through 2012. We assign no related impact. See listing under FNMA (Sec. 4.1) for economic and regulatory context.

New Enterprise Housing Goals for 2010-2011 Issued September 14, 2010.

The FHFA completely overhauled the affordable housing goals for Fannie and Freddie. We assign no related impact. See listing under FNMA (Sec. 4.1) for background and context.

Third Amendment to Senior Stock Purchase Agreement Signed: August 17, 2012

See listing under FNMA (Sec. 4.1) for background and context.

Policy Change	Agency	Impact	News	Effective	Classification
Portfolio Limit Decrease	FHLMC	-$22.16 billion	Aug. 2012	Aug. 2012	Non-Cyclical

On August 17, 2012, the Treasury Department announced a third amendment to the Enterprises' SPSPAs, which capped both retained portfolios at a reduced $650 billion at the end of 2012, accelerated the annual pace of wind down from 10% to 15%, and replaced the standing 10% quarterly dividend requirement with a sweep of all present and future net earnings (see FNMA, Sec. 4.1).The amendments to Freddie's SPSPA were identical to Fannie's.

As of July 31, 2012, Freddie's total retained portfolio was approximately $576 billion, implying no additional mandated reduction by the end 2012. Under the newly amended SPSPA, the Enterprises portfolios were capped at $552.5 billion by the end of 2013, down from $590.49 billion prior to the third amendment. We measure the impact of the SPSPA amendment as the difference in mandated reductions before and after the amendment. We assign an annualized requisite portfolio reduction of $22.16 billion for the year starting in August 2012, being the additional required reduction in 2012 and the required reduction for 2013 pro-rated through July 2013 $\big((\$552.5 - \$590.49)\times\frac{7}{12} = -\$22.16 \text{ billion}\big)$.

While the Enterprises' share prices and excess returns became exceedingly volatile and rather uninformative after conservatorship sunk shares under a dollar, share movements nonetheless suggest that the third SPSPA amendment was genuinely unanticipated; Freddie's share price fell an unusually steep 23.33% on August 17, with trading volumes up more than 24-fold from the previous day of trading. Moreover the news did not seem anticipated by the financial press. As with Fannie, we classify the third SPSPA amendment as motivated by varying political priorities and budgetary concerns, as opposed to being cyclically motivated (see listing under FNMA, Sec. 4.1, for an overview of classification and related context).

New Enterprise Housing Goals for 2012-2014 Issued November 13, 2012

FHFA issued final rules decreasing affordable housing goals for 2012 through 2014, relative to the newly overhauled goals for 2010 and 2011, which had not been met. We again assign no related impact. See listing under FNMA (Sec. 4.1) for background and context.

4.3 Government National Mortgage Association

The Housing and Urban Development Act of 1968 partitioned the Federal National Mortgage Association into two separate corporations: a publicly retained Government National Mortgage Association and a privately chartered, shareholder-owned FNMA granted government sponsorship and special legal privileges.

GNMA was to continue special assistance functions and the management and liquidating functions, authorized under Sections 305 and 306 of the National Housing Act, respectively, and retained FNMA's standing special assistance authority, assets, and liabilities pursuant to those sections. FNMA was to continue operating all secondary market operations and retained the assets and liabilities pursuant to Section 304 of the National Housing Act (see FNMA, Sec. 4.1).

Ginnie Mae's special assistance functions were initially used to smooth mortgage credit during credit crunches and/or to provide support for special classes of FHA/VA mortgages at below-market rates. GNMA's special assistance authority was split between executive and congressional control. Authority under Section 305(c) could be used at the discretion of the president ("general presidential special assistance authority"). And Section 305(g) authorized Congress to direct HUD to purchase mortgages for low cost housing for low- and moderate-income families ("emergency special assistance for low- and moderate income housing").

In 1974, Congress authorized a new Emergency Mortgage Purchase Assistance program ("emergency special assistance"), aimed at stabilizing housing construction and easing the effects of inflation and monetary tightening on the housing and mortgage markets. GNMA's special assistance and emergency special assistance programs would purchase loans at below-market rates and latter resell them at par, with these functions essentially serving as revolving funds for a credit subsidy. Losses on sales were financed with borrowing from the Treasury and/or direct appropriations. By selling off its subsidized purchases, Ginnie reduced its footprint on the unified budget deficit, from purchases to net-of-sales purchases. Emergency special assistance authority was repeatedly extended until expiring in 1981, and both of GNMA's special assistance functions were fully repealed in 1983.

Prior to the split of Fannie and Ginnie, the Participation Sales Act of 1966 (Pub. L. 89-429) had authorized FNMA to issue participation certificates backed by pools of loans made or acquired by federal credit agencies. Shortly thereafter, the Housing and Urban Development Act of 1968 authorized GNMA to issue MBS, and Ginnie marketed the first ever MBS in 1970. Ginnie's MBS are exclusively backed by mortgages insured or guaranteed by other government agencies, primarily FHA and VA mortgages, but also those of the U.S. Department of Agriculture's Office of Rural Development and HUD's Office of Public and Indian Housing. In exchange for a guarantee fee, Ginnie guarantees timely payment of interest and principal repayment, covering any loan losses in excess of the amount otherwise insured or guaranteed. Unlike the Enterprises' debt and MBS, Ginnie's guarantee is explicitly backed by the full faith and credit of the United States. And contrary to Fannie and Freddie, Ginnie insures MBS issued by approved issuers (typically banks and credit unions) instead of purchasing and packaging securities themselves. Guaranteeing MBS has comprised nearly all of Ginnie's activity in mortgage markets since Congress wound down its special assistance programs in the early 1980s.

Ginnie Mae was created as a government corporation under HUD administration, and thus remained on the federal budget balance, with profits or losses passed on to the Treasury. Through the federal budget

process, Ginnie Mae was subject to more programatic oversight than Fannie or Freddie.[85] The Participation Sales Act of 1966 authorized the establishment of appropriations to cover interest payments to holders of government-backed PCs exceeding the interest payments received from the backing pool of mortgages or other obligations. A permanent, indefinite appropriation was made for GNMA to cover insufficiencies for sales authorized through 1967, while meeting payment insufficiencies on subsequent sales required annual appropriations (1979 Budget Appendix, p. 493).

Housing and Urban Development Act of 1968 (Pub. L. 90-448) Enacted: August 1, 1968

See listing under FNMA (Sec. 4.1) for economic context and legislative background.

Policy Change	Agency	Impact	News	Effective	Classification
Special Assistance Increase	GNMA	+$0.25 billion	Aug. 1968	July 1969	Non-Cyclical

The Act split Fannie Mae into the Government National Mortgage Association and a quasi-private Fannie Mae. Ginnie Mae, a government corporation under HUD administration, assumed FNMA's special assistance and management and liquidations functions. Ginnie Mae remained on the federal budget balance, with profits or losses passed on to the Treasury.

The Act also first authorized Fannie and Ginnie to issue mortgage-backed securities issued by FNMA or other approved issuers. Ginnie was authorized to guarantee the timely payment of principal and interest on trust certificates or securities backed by pools of mortgages insured under the National Housing Act or insured or guaranteed under the Servicemen's readjustment Act of 1944. Ginnie was also authorized to collect guarantee fees from issuers. Unlike Fannie's MBS authorization, "*The full faith and credit of the United States is pledged to the payment of all amounts which may be required to be paid under any guaranty*" authorized by GNMA's MBS program. According to the 1970 Economic Report of the President, the objective of Ginnie's MBS program was "*to authorize a mortgage investment instrument that would be marketable and attractive to a wide range of investors not now interested in mortgages directly*" (ERP 1970, p. 114).

The Act also increased Ginnie's special assistance authority under Section 305(c) of the NHA (general Presidential special assistance authority) by $500 million, to $3.325 billion, effective July 1, 1969. Using the two-year rule, we assign an annualized increase in GNMA's purchase capacity of $250 million in August 1968. We classify the Act as non-cyclically motivated; economic and legislative background and the justification for this classification is discussed at length in the Act's listing under FNMA (see Sec. 3.2). But given the gap between the policy's announcement and its

[85]The federal budget process largely proceeds along three related tracks: administration budget requests, authorizations, and appropriation bills. The president requests a detailed budget from Congress, which proposes funding levels for agencies and programs. Through authorizing bills, Congress can create or repeal programs, and direct how federal funds should or should not be used. Appropriations bills set overall discretionary spending spending limits for agencies or programs. Appropriations bills for the Department of Housing and Urban Development usually include a line item appropriating funds requested by the administration to cover any insufficiencies from participation sales. Starting in 1980, the federal budget process began to impose explicit restrictions on federal credit programs and loan guarantees, including Ginnie Mae's MBS guarantees. Annual appropriations bills have subsequently included a fiscal year aggregate limitation on Ginnie Mae's authorization to enter new commitments to issue guarantees under Section 306 of the National Housing Act. Prior to their repeal, the special assistance functions were also governed by congressional authorizations and appropriations, switching to loan limits in 1980 (also set through appropriations).

effective date, we classify the funding increase as anticipated too far in advance of taking affect to be used as a policy instrument.

Housing and Urban Development Act of 1969 (Pub. L. 91-152) Enacted: December 24, 1969

Policy Change	Agency	Impact	News	Effective	Classification
Special Assistance Increase	GNMA	+$0.75 billion	Dec. 1969	Dec. 1969	Cyclical

The Act raised Ginnie's Section 305(g) authorization (emergency special assistance program for low- and moderate-income housing) for total purchases and commitments outstanding for mortgages insured under Title II of the National Housing Act or guaranteed under the Servicemen's Readjustment Act of 1944 by $1.5 billion, to $2.5 billion. The revision was effective upon the bill's enactment. Using the two-year rule, we assign an annualized increase of $750 million in Ginnie Mae's purchase capacity in the year starting December 1969.

The Act also amended Section 305 of the NHA to provide statutory authorization for subsidized special assistance purchases "*at a price equal to par and to sell these mortgages either immediately or at any other time at a price lower than par if necessary to meet the range of market prices.*" The accompanying Senate committee report explained that "***under present mortgage market conditions***, *FHA-insured mortgage loans can only be made at heavy discounts. As a result, many potential sponsors, particularly of section 236 rental and cooperative housing and section 221(d)(8)rent supplement housing, have been discouraged from sponsoring such housing or have done so at great financial sacrifice. The same is true for home purchasers under programs such as section 235*" (Senate Committee on Banking and Currency (1969), p. 11). The report also explained that "*No new authorizations are necessary to initiate this program, since GNMA has available approximately $1.9 billion in unused authorization.*" The Act also increased the per dwelling unit loan limitations on mortgages purchased under GNMA's special assistance programs.

The Senate Committee report noted that the bill did "*not include any new far-reaching programs*" and framed the bill as making economically motivated funding adjustments to the 'comprehensive' housing bill enacted the previous year: "*The nose significant part of the committee bill involves the dollar authorizations to fund the programs through fiscal year 1972. In general, the committee authorized funds to continue the programs at existing levels, but raised the amount authorized to take into account new program authority increased costs, and increased interest charges... to be consistent with the goals requirements of the 1968 Housing and Urban Development Act*" (Senate Committee on Banking and Currency (1969), pp. 1-2). Whereas the 1968 HUDA evolved from a slew of related bills dating back to 1965, the 1969 HUDA was drafted in just a few months and was much shorter-term in scope; and the bill was fully drafted and then enacted in the midst of the credit crunch enduring from 1969Q1 through 1970Q1.[86] Given the timing of enactment and congressional concern with prevailing mortgage market conditions, we classify the policy change as cyclically motivated.

Emergency Home Finance Act of 1970 (Pub. L. 91-351) Enacted: July 24, 1970

See listing under FNMA (Sec. 4.1) for economic context and legislative background.

[86]The Senate Committee on Banking and Currency held hearings in July 1969, and the bill was first reported in September 1969, three months before passage.

Policy Change	Agency	Impact	News	Effective	Classification
Special Assistance Increase	GNMA	+$0.38 billion	July 1970	July 1970	Cyclical

The Act authorized Fannie Mae to expand secondary market operations to the conventional mortgage market and charted Freddie Mac to serve as a secondary market for the FHLB System (see listings under FNMA, Sec. 4.1, and FHLMC, Sec. 3.2). The Act also loosened the requirement that Ginnie purchase mortgages at par value under the Section 305(g) special assistance function (emergency special assistance program for low- and moderate-income housing). And the Act increased Ginnie's Section 305(c) general Presidential special assistance authorization by $1.5 billion, by amending a prior increase effective July 1, 1969 from $500 million to $2 billion. Part of this increase was offset by decreasing the authorization for Section 305(g) special assistance functions by $750 million, to $1.75 billion, effective upon enactment. Thus the Act's net impact across all special assistance authorities was a $750 million increase, effective upon enactment. Using the two-year rule, we assign an annualized increase of $375 million in the year starting July 1970.

Testifying before the Senate Committee on Banking and Credit on March 3, HUD Secretary Romney had identified the administrations objective of delivering *$20.5 billion of net new mortgage credit needed to finance 1.4 million* ***housing starts***," to be advanced by the transfer and $1.5 billion net increase of GNMA special assistance funds, GNMA MBS issues, and a FHLBank subsidy to members (CQ (1971)). The accompanying Senate committee report explained that the Section 305(g) program had an unused balance of over $2 billion, which with the reallocation of funds and loosened restrictions on the program,"*could be made* ***immediately available*** *upon enactment of this bill to* ***support the badly sagging FHA single-family construction program***." (Senate Committee on Banking and Currency (1970), p. 10).

Given the clearly stated motivations of immediately supporting the housing market and the bill's enactment in the midst of the recession lasting from December 1969 through November 1970, we classify this expansion of Ginnie's special assistance purchase authority as cyclically motivated. Economic and legislative background and the justification for this classification is discussed at more length in the Act's listing under FNMA (see Sec. 3.2).

Tandem Program for FHA/VA Loans

Announced: September 19, 1973–May 10, 1974

Policy Change	Agency	Impact	News	Effective	Classification
FHA/VA Tandem Authorization	GNMA	$1.5 billion	Sep. 1973	Sep. 1973	Cyclical
FHA/VA Tandem Authorization	GNMA	$3.3 billion	Jan. 1974	Jan. 1974	Cyclical
FHA/VA Tandem Authorization	GNMA	$1.65 billion	May 1974	May 1974	Cyclical

In 1970, GNMA first developed a 'Tandem' plan designed "*to reduce cash outlays from mortgage purchases*" while supporting the mortgage market (GNMA Annual Report 1975, p. 15). Rather than referring to a specific plan or round of purchases, 'Tandem' referred more to a general approach of making subsidized loan purchases and resales *in tandem*, to minimize the program's appearance on the federal budget balance. As CEA staff economist George von Furstenburg explained to the Senate Committee on Banking, Housing, and Urban Development: "*Tandem or piggyback procedures were first introduced in 1968 partly to minimize the effect of federally assisted mortgage credit programs on the unified*

budget balance. Since the net lending of government agencies represents an outlay above the line, GNMA's acquisition of below-market interest rate mortgages increased the budget deficit by the full amount of the purchase price. Under tandem, these mortgages were resold to the private market at a price sufficiently below par to afford a normal return to investors. Thus only the discount or the present value of the interest subsidy represented an outlay and the cycle could continue 'in tandem' with further purchases" (Senate Committee on Banking, Housing and Urban Affairs (1976b), p. 82). GNMA's 1975 Annual Report, however, instead framed the term as stemming from cooperation between the public and private sectors: "*the Government and the private sector can be said to be working in 'tandem' to provide support to the mortgage market and the housing industry*" (GNMA Annual Report 1975, p. 15).

Under the various Tandem programs, Ginnie Mae would commit to purchase mortgages for new home construction at a pre-specified (typically subsidized) interest rate, purchase those mortgages as the home sales were completed, and then quickly auction off the mortgages at prevailing interest rates (Nixon (1974)). If GNMA's resale price was below the purchase price, the interest rate subsidy cost would be passed along to the federal budget balance. GNMA's Tandem commitments were generally priced 100 to 200 basis points below the market (Senate Committee on Banking, Housing and Urban Affairs (1976b), p. 79). The perceived advantage of the program was locking in a favorable interest rate and reducing uncertainty for the buyer, lender, and home builder.

The initial Tandem program purchases were made from authorizations under existing special assistance functions, as opposed to resulting from new legislation, either at the discretion of Congress or the president. Tandem programs were initially targeted toward subsidized mortgage programs for low-income homebuyers, particularly in multifamily units (FHA's Section 221(d)(3), 235, and 236 loan programs), but the purchase program was extended to all unsubsidized FHA and VA mortgage insurance and guarantee programs in September 1971 (Senate Committee on Banking, Housing and Urban Affairs (1976b), p. 82). The only restrictions on GNMA's Tandem loan commitments was that the newly constructed homes qualify for FHA/VA insurance, and that the loan balance be under $38,000, except in high cost areas.

On January 5, 1973, President Nixon ordered a moratorium on federal housing subsidy programs, including the Section 235 (home ownership) and Section 236 (rental and cooperative housing) FHA programs that had been supported by the Tandem Program (CQ (1974)). In his State of the Union Address on housing and community development that March, he announced the administration was undergoing a comprehensive overview of HUD programs and recommendations would be made regarding the halted programs within six months. That speech reaffirmed the administration's commitment to the overarching goal of U.S. housing policy of "*a decent home and a suitable living environment for every American family*" enshrined by the National Housing Act of 1949, and touted that "*the percentage of Americans living in substandard housing has dropped dramatically from 46 percent in 1940 to 37 percent in 1950 to 18 percent in 1960 to 8 percent in 1970,*" aided by federal programs (Nixon (1973a)). The emphasis of the speech and intended overhaul was addressing perceived inefficiencies and inequities in HUD programs, and there was no mention of housing credit.

But the administration's focus had shifted by the time President Nixon announced a series of legislative and administrative proposals on September 19, 1973, which were primarily intended to ease the prevailing tight mortgage market conditions but also to improve low-income housing conditions. Nixon stated that "*First, we are **facing certain problems in providing adequate housing credit**–and we must **move promptly** to resolve them. Second, too many low-income families have been left behind: they still live in substandard, overcrowded and dilapidated housing–and we must help them meet their needs*" (Nixon (1973b)). It was announced that the housing program moratorium was being

lifted and HUD was authorized to reinstate GNMA's Tandem Plan and make up to $3 billion in commitments and purchases of mortgages for new home construction at subsidized interest rates. This was an unprecedentedly large release of presidential special assistance authority. The FHLBanks were also authorized to make forward commitments up to $2.5 billion at a predetermined rate of interest to member savings and loan associations. The President also requested that Congress raise the maximum amount of a mortgage loan insurable by the FHA and purchasable by GNMA, and a reduction of FHA downpayment requirements, among other legislative proposals (Nixon (1973b)).

On January 21, 1974, President Nixon authorized GNMA to purchase up to $6.6 billion worth of FHA/VA home mortgages at an interest rate of 7.75% (roughly 200,000 units); a second authorization made on May 10 allowed purchase of up to an additional $3.3 billion at an interest rate of 8.0% (roughly 100,000 units), but this authority was not used until October, when the first authorization had been fully expended.

In a May 10 statement about plans to revitalize the housing market, Nixon clearly outlined cyclical motives for the Tandem authorization and a broader housing stimulus agenda: "*The higher cost of money affects all sectors of the economy, but none more directly than the housing market... With this shrinkage of available housing funds, home buyers are either unable to find mortgage money, or the mortgages that are available are offered on terms which fewer families can meet. The home builder finds it increasingly difficult to sell the homes he has already built, and with the* ***uncertainties of the availability of such mortgage funds****, he is understandably reluctant to produce more housing.* ***As builders curtail operations, workers in the construction trades face the prospect of increased unemployment****.*" Nixon also claimed that "*The Tandem Plan is a very useful instrument for* ***supporting the housing market in times of credit stringency***" (Nixon (1974)).

Using the two-year rule, we assign annualized increases in GNMA's purchase authorization of $1.5 billion in September 1973, $3.3 billion in January 1974, and an additional $1.65 billion in May 1974. Given the President's explicit cyclical motives and the timing of the authorization in the lead up to and midst of the recession lasting from November 1973 through March 1975, we classify all three major Tandem authorization releases as cyclically motivated.

Emergency Home Purchase Assistance Act of 1974 (Pub. L. 93-449) Enacted: October 18, 1974

Policy Change	Agency	Impact	News	Effective	Classification
Brooke-Cranston Tandem Program	GNMA	+$3.88 billion	Oct. 1974	Oct. 1974	Cyclical

The Act amended Section 313 onto the National Housing Act to establish a statutory Tandem program for the subsidized purchase of conventional mortgages, commonly referred to as the Brooke-Cranston Tandem program or "emergency special assistance authority." The Act authorized the Secretary of Housing and Urban Development to instruct GNMA to make emergency mortgage commitments and purchases "*whenever the Secretary finds inflationary conditions and related governmental actions are having a severely disproportionate effect on the housing industry and the resulting reduction in the volume of home construction or acquisition threatens seriously to affect the economy and to delay the orderly achievement of the national housing goals....*" The Act authorized GNMA to make purchases and commitments of up to $7.75 billion outstanding at any given time under the Brooke-Cranston Tandem program, above and beyond GNMA's standing $7.75 billion authority to purchase certain FHA/VA mortgages under its traditional special assistance functions. The new $7.75 billion authorization was effective upon enactment but set to expire after one year, save purchases needed to honor prior commitments and for the provision of liquidations.

Unlike the previous Tandem programs primarily directed toward specific classes of FHA/VA mortgages focused on low-income housing, the Brooke-Cranston program was primarily intended "*as an* ***emergency device for stabilizing the housing market against cyclical downturns***" by stimulating housing construction (Senate Committee on Banking, Housing and Urban Affairs (1976b), p. 1). Under a HUD regulation, at least 90% of the mortgages had to be for new home purchases, completed after October 1973, and not previously owned by a homeowner (Senate Committee on Banking, Housing and Urban Affairs (1976b), p. 14). As a secondary objective, the program was intended to improve home buying opportunities for households otherwise unable to purchase a home. Under the Tandem program, GNMA was tasked with slowing or stopping declines in housing market activity by issuing commitments to purchase and purchasing conventional mortgages from originators, though qualifying mortgages were limited to an 80% LTV ratio and $42,000 loan limit, well below the conforming loan limit for conventional mortgages. Interest rates were set at the average yield on issues of 6-to-12-year Treasury bonds in the month preceding the commitment date, plus administrative costs (Senate Committee on Banking, Housing and Urban Affairs (1976b), pp. 13-14).

On the day of enactment the HUD Secretary authorized $3 billion worth of commitments and purchases of conventional mortgages at an interest rate of 8.5% (ERP 1975, p. 72). Freddie and Fannie served as agents for GNMA in its purchases of below-market rate conventional mortgages, with each institution allocated half of the funds allocated to conventional mortgage purchases (Senate Committee on Banking, Housing and Urban Affairs (1976b), p. 14). After this authority had been expended, an additional $3 billion was authorized for mortgages at an interest rate of 7.75% on January 16, 1975, including $1 billion for the purchase of FHA/VA mortgages. The terms were overly attractive, and the entirety of this authorization was exhausted on January 22. A final authorization of $2 billion was made in August 1975.[87]

While the authorization was scheduled to expire after one year, subsequent purchases were authorized to fulfill commitments made in the first year's authorization because of the lag between commitments and purchases; extensions of such authorization sunsets had considerable precedent and the program was indeed repeatedly extended before expiring in 1981 (see below). Accordingly we deem the two year rule most appropriate for such GNMA commitment authorizations even when they are not open ended, and assign a $3.875 billion annualized increase in GNMA's purchase capacity in the year starting October 1974. The bill was clearly enacted in response to depressed housing market conditions, with the accompanying Senate Committee report stating that the bill "***responds to a mortgage credit crisis*** *which has crippled the residential real estate industry in the United States. Housing activity in the Nation is severely depressed.*" We classify the policy change as cyclically motivated.

Department of Housing and Urban Development-Independent Agencies Appropriation Act, 1976 (Pub. L. 94-116) Enacted: October 17, 1975

Policy Change	Agency	Impact	News	Effective	Classification
Brooke-Cranston Tandem Increase	GNMA	+$2.5 billion	Oct. 1975	Oct. 1975	Cyclical

The Emergency Housing Act of 1975 (Pub. L. 94-50), enacted July 2, 1975, authorized up to an additional $10

[87] The final authorization exceeded the remaining $1.75 billion previously unauthorized because of subsequently cancelled prior commitments.

billion for emergency commitments and conventional mortgage purchases under the Brooke-Cranston Tandem program authorized under Section 313(g) of the National Housing Act, subject to appropriations. The Act also permitted GNMA to purchase conventional mortgages on multifamily properties and individual condominium units. And the Act rescinded authorization from any remaining uncommitted funds from the prior $7.75 billion authorization, effective October 18, 1975, unless approved by an appropriations bill.

The Department of Housing and Urban Development-Independent Agencies Appropriation Act for Fiscal Year 1976 (Pub. L. 94-116) authorized up to an additional $5.0 billion for purchases and commitments to purchase mortgages under Section 313 of the National Housing Act, above and beyond prior authorizations, which were extended beyond their October 18 sunset. GNMA was authorized to borrow from the Treasury as needed to meet obligations under this amended authorization.

The Senate committee report accompanying the HUD-Independent Agencies Appropriations Act stated that the objective of the $10 billion increase in the Brooke-Cranston Tandem authorization provided by the Emergency Housing Act was "*to* ***help support an increase in residential construction and thus provide jobs, reduce unemployment and stimulate the economy***" (Senate Committee on Appropriations (1975), p. 20). That report also suggested that the administration's budget request had been reduced to $5 billion, the amount subsequently appropriated.[88]

Using the two-year rule we assign an annualized increase of $2.5 billion in GNMA's ability to purchase mortgages, starting October 1975, when the appropriations bill cleared the way for additional funds released. The HUD Secretary made $3 billion available in January 1976, and the remaining $2 billion was released in September 1976 (Senate Committee on Banking, Housing and Urban Affairs (1978), p. 25).

Given both the economic stimulus motives of the increased purchase authorization the overarching intent behind the Brookes-Cranston Tandem program, we classify the change as cyclically motivated.

Department of Housing and Urban Development-Independent Agencies Appropriation Act, 1978 (Pub. L. 95-119) Enacted: October 4, 1977

The appropriations Act limited GNMA's Section 305 special assistance authorizations to make commitments and purchases using recaptured purchase authority to $2 billion, without fiscal year limitation. Recaptured purchase authority was that generated by GNMA's portfolio sales, repayments, and commitment cancellations, and which circumvented the need for new budget authority. Prior to enactment, there was no limitation on how much recaptured special assistance authority could be used. The policy change was made in the broader context of Congress trying to tighten control over federal credit subsidies and loan guarantees, and budget process reforms more generally.

Both the House and Senate bills would have initially barred all default use of GNMA's recaptured special assistance authority, clarifying that "*any loan or mortgage commitments made out of receipts of corporate funds, previously released in appropriations acts and subsequently recaptured, may not be reused without further appropriations action unless otherwise required by law*," further explaining that the provision was "*in agreement with the intent of the Congressional Budget and Impoundment Control Act that control be exercised over corporate receipts.*" (House Committee on Appropriations (1977), p. 58). The conference bill added an amendment allowing up to $2 billion of recaptured special assistance purchase authority to be used. We could not find, however, any related explanation for the amendment in the conference agreement increasing special assistance authority via recaptured funds. It is also unclear how

[88] Net budgetary outlays would be much lower, by the design of the Tandem program.

much recaptured special assistance authority was being used by Ginnie Mae ahead of this policy change. We thus consider this policy change as setting a baseline for current policy with respect to Ginnie's special assistance functions, instead of classifying it as a significant policy change.

Housing and Community Development Act of 1977 (Pub. L. 95-128) Enacted: October 12, 1977
See listing under FNMA (Sec. 4.1) for economic context and legislative background.

Policy Change	Agency	Impact	News	Effective	Classification
Brooke-Cranston Tandem Expansion	GNMA	+$3.75 billion	Oct. 1977	Oct. 1977	Non-Cyclical

The Act extended the authorization of the Brooke-Cranston Tandem program under Section 313 of the National Housing Act for one year, through October 1, 1978. The Act capped purchases and commitments to purchase under that authority at $7.5 billion for FY1978, which was not conditional on appropriations.

The Act also expanded the purpose of the emergency special assistance authority authorized by Section 313 of the NHA from solely economic stabilization to also promoting home ownership for moderate-income households, with the following language amended onto that Section's purpose: "*To the extent feasible and consistent with the primary purpose of this section to stabilize housing production, the Secretary may direct the exercise of the authority conferred by this section to promote homeownership opportunities for moderate-income families.*" The Act also gave the HUD Secretary more flexibility in targeting purchases towards urban areas and housing rehabilitation.

The accompanying Senate Report explained that the $7.5 billion purchase ceiling for FY1978 "*does not constitute a new authorization, but rather places a limit on the amount which GNMA may use in the next fiscal year from funds which have previously been authorized. Since the program's enactment in 1974, Congress has authorized $17.750 billion, most of which has been used to purchase mortgages, and much of which has been recouped by the Federal Government when the loans were sold off... The Administration has proposed an amendment, currently pending before the Committee on Appropriations, which would prohibit GNMA from rolling over the program funds in this manner, in order to establish greater financial control. The Committee concurs that there is a need to establish an explicit congressional authorization for permitting re-use of recaptured funds, and has, therefore, set a $7.5 billion dollar ceiling in FY 1978. The Committee has taken this action as means of placing a limit on the use of previous authorizations, rather than as authorizing new budget authority*" (Senate Committee on Banking, Housing and Urban Affairs (1977), pp. 30-31).

Since the enacted ceiling on rolling over previously authorized funds was looser than the administration's proposal that would have barred any roll over, and its design circumvented new budget authority that would otherwise have been needed, we view this amendment as increasing GNMA's purchase capacity rather than merely continuing current policy. And because the Brooke-Cranston Tandem program had been statutorily set as a temporary emergency power with a purely cyclical motivation, the purchase program was partially repurposed by the Act, thus substantially changing the composition of GNMA's purchase capacity. While the authorization was scheduled to expire after one year, subsequent purchases were authorized to fulfill commitments made in the first year's authorization, and there was considerable attraction between GNMA's commitments and purchases. Consequently we apply the two-year rule, scoring the impact as increasing annualized purchase capacity by $3.75 billion for the year starting October 1977.

The economy was experiencing neither a recession nor a credit crunch when the Tandem program was reoriented toward housing policy goals for low- and moderate income households. The amendment was also made in the context of a broader housing bill focused on longer-term policy goals, as opposed to emergency responses or depressed housing conditions. We thus classify the policy change as unrelated to the business or financial cycle. Economic and legislative background as well as the justification for this classification is discussed at more length in the Act's listing under FNMA (see Sec. 3.2).

Department of Housing and Urban Development-Independent Agencies Appropriation Act, 1979 (Pub. L. 95-392) Enacted: September 30, 1978

Policy Change	Agency	Impact	News	Effective	Classification
Special Assistance Increase	GNMA	+$1.0 billion	Sep. 1978	Oct. 1978	Non-Cyclical

The appropriations bill increased the limitation on emergency special assistance purchases and commitments pursuant to Section 313 of the NHA by $1 billion, to be paid from recaptured purchase authority. The administration had not requested an increase in the authorization for the Brooke-Cranston Tandem program, and the House bill had not recommended it, but the Senate Appropriations Committee recommended granting "*stand-by authority to commit these funds in the event that a depressed housing market threatens to lower housing production, especially in the multifamily area*" (Senate Committee on Appropriations (1978), p. 13). In the conference bill, the House and Senate compromised on a standby increase of $1 billion for the Tandem program, but added language instructing that "*the funds not be made available in the absence of a recession in the housing industry*" (House Committee on Appropriations (1978), p. 6).

The Act also further increased special assistance authority under NHA Section 305 by $2 billion, of which $1.5 billion could be made from recaptured special assistance purchase authority and the remaining $500 million from new borrowing authority. There was no fiscal year limitation accompanying this authorization. The net $2 billion in new purchase authority had been requested by GNMA and the President's budget, primarily to fund the planned purchase of new and heavily rehabilitated housing for low- and moderate-income households. The $1.5 billion authorization from recaptured purchase authority was above and beyond the $2 billion cap to such funds enacted by the Department of Housing and Urban Development-Independent Agencies Appropriation Act, 1978 (see above), so we consider it a significant policy change instead of a continuation of current policy for special assistance functions.

In conjunction with the appropriations bill, the Housing and Community Development Amendments of 1978 (Pub. L. 95-557), enacted October 31, 1978, extended authorization for the Brooke-Cranston Tandem program under NHA Section 313 for one year, through October 1, 1979. The latter Act also increased general special assistance authority by $500 million on October 1, 1978, subject to approval by an appropriations bill (as had just been approved). The Housing and Community Development Amendments of 1978 additionally increased GNMA's conforming loan limits for purchases to $55,000 for single-family homes and up to $68,750 for four-unit homes, previously been set at $33,000 and $40,500, respectively.

According to the accompanying Senate committee report, the $1.5 billion authorization from recaptured purchase authority was intended to "*support the production of approximately 50,000 new and substantially rehabilitated housing*

units for low- and moderate-income families assisted under the section 8 program" (Senate Committee on Appropriations (1978), p. 13). The other $500 million increase was to be used for a 'Targeted Tandem' program for "*mortgages on projects located in distressed cities and neighborhoods which are undergoing or showing prospects for revitalization*" (Senate Committee on Appropriations (1978), p. 13). The purchases were to bear below-market interest rates as low as 7.5%, more than two percentage points below prevailing 30-year conventional mortgage fixed rates. The report also noted that "*the net outlay per $1,000,000,000 of mortgage purchase authority exercised is only $150,000,000 or so*," implying that the budgetary cost of the authorization would be under $300 million, depending on commitment cancellations.

The economy was not in recession, but had just entered the credit crunch lasting from 1978Q2 through 1982Q4 when the bill was enacted. The 1979 Economic Report of the President, however, suggested that housing and mortgage market conditions were holding up quite well, and construction was at capacity, despite rising interest rates in the second half of the year: "***Housing activity remained on a plateau throughout last year**, following nearly 3 years of steady advance. Real residential construction, on a calendar year basis, was 3.5 percent above that in 1977, and there were 2.0 million housing starts last year... This leveling of housing starts and residential construction in 1978 was **not surprising**. Three years of strongly rising building activity had filled backlogs of demand created by the depressed level of new construction during the 1973-74 period of credit restraint and low income. Moreover, the sharp rise in prices of a wide range of building materials **suggests that the building industry was operating at close to capacity in 1978**. Indeed, the striking feature of the housing sector last year was its **continued high level of activity in the face of sharply rising interest rates**.*"

Because there was no imminent downturn in the housing market at the time, we do not consider the conditional standby emergency special assistance authorization to be a binding increase in purchase capacity. Using the two-year rule, we assign a $1 billion annualized increase in Ginnie's purchasing capacity from the Section 305 special assistance authority increase, starting September 1978.

The increase in general special assistance authority was distinctly oriented toward specific social policy objectives related to low-income housing. Moreover, the conditional increase in Tandem purchase authority served as an insurance policy in the event of a recession, suggesting that policymakers were not intending the general special assistance increase to serve a counter-cyclical role. The GNMA special assistance authority budget request in the 1979 Budget emphasized supporting FHA programs with below-market interest rates, and made no mention of economic conditions or cyclical motives (1979 Budget Appendix, p. 493). The appropriations committee merely met the administration's request, which was made on January 20, 1978, predating the credit crunch, without any adjustment for subsequent economic trends. We thus classify the unconditional increase in Section 305 purchase authority as unrelated to the business or financial cycle.

Department of Housing and Urban Development-Independent Agencies Appropriation Act, 1980 (Pub. L. 96-103) Enacted: November 5, 1979

Policy Change	Agency	Impact	News	Effective	Classification
Special Assistance Increase	GNMA	+$1.0 billion	Nov. 1979	Nov. 1979	Non-Cyclical

The Act again further increased the general special assistance authorization by $2 billion, to be funded entirely out of recaptured special assistance purchase authority. There was no fiscal year limitation accompanying this authorization. The additional $2 billion in purchase authority had been requested by GNMA and the President's budget, with $1.5 billion earmarked for the planned purchase of new and heavily rehabilitated housing for low- and moderate-income households. The remaining $500 million was intended for the Targeted Tandem program for mortgage purchases related to urban revitalization in distressed cities (Senate Committee on Appropriations (1980), p. 15). Using the two-year rule, we score the impact as increasing annualized purchase capacity by $1 billion for the year starting November 1979.

The economy was not in recession, but had just entered the credit crunch lasting from 1978Q2 through 1982Q4 when the bill was enacted. The 1980 Economic Report of the President offered the following overview of housing and mortgage market conditions: "*The decline in residential construction in 1979 was about in line with expectations at the beginning of the year, although interest rates increased much more than had been anticipated. For the year as a whole, real residential construction was 6 percent below the high 1978 level, and new housing starts fell to about 1.74 million units from 2 million in the previous year... The rising cost of mortgage and construction financing depressed housing sales and starts only moderately until late in the year... Following Federal Reserve action in early October to tighten monetary policy, mortgage interest rates rose sharply, reaching levels well above usury limits in many States.*" (ERP 1980, pp. 43-44).

The authorization of funds was, however, focused on longer-term policy toward urban revitalization and affordable housing for lower- and moderate-income households, particularly the Carter administration's prioritization of expanding Section 8 housing.[89] Moreover, the appropriations committee merely met the administration's budget request submitted January 22, 1979, with no adjustment for the subsequent deterioration in the housing and mortgage markets. We thus classify the authorization as unrelated to the business cycle.

Housing and Community Development Amendments of 1979 (Pub. L. 96-153)

Enacted: December 21, 1979

Among many other provisions, the Act waived GNMA's Sec. 305 special assistance program loan limits, to allow for the purchase of any loan insured under a number of targeted FHA programs when at least 20% of the mortgages fell under Section 8 of the National Housing Act. The stated purpose of the bill in its preamble was "*To amend and extend certain Federal laws relating to housing, community and neighborhood development and preservation, and related programs, and for other purposes*," and the bill very much suggested that the stance of U.S. federal housing policy was focused on longer-term distributional and social insurance motives, as opposed to cyclical motives. We do not consider this a significant policy change affecting Ginnie's capacity to purchase mortgages.

The 1980 Economic Report of the President noted that by 1979, more than two-thirds of FHA/VA mortgages were being packaged into pools guaranteed by GNMA, helping to "sustain the flow of mortgage credit" (ERP 1980, pp. 43-44).

[89] In particular the Housing and Community Development Acts of 1977 and 1980 significantly expanded Section 8 housing programs, and the Housing and Community Development Amendments of 1979 expanded GNMA's purchase capabilities with respect to Section 8 housing (see below).

Department of Housing and Urban Development-Independent Agencies Appropriation Act, 1981 (Pub. L. 96-526) Enacted: December 15, 1980

Policy Change	Agency	Impact	News	Effective	Classification
Special Assistance Decrease	GNMA	-$0.2 billion	Dec. 1980	Oct. 1980	Cyclical

The Housing and Community Development Act of 1980 (Pub. L. 96-399), enacted October 8, 1980, extended the authorization for the Brooke-Cranston Tandem program under NHA Section 313 for one year, through to October 1, 1981. The authorization was subsequently allowed to expire. Eligible purchases under the Brooke-Cranston Tandem program were expanded to also include mortgage-related securities. The Act also increased GNMA's Section 305(c) general Presidential special assistance authority by $900 million, effective October 1, 1980, again subject to approval in an appropriation act.[90]

Two months later, the corresponding Department of Housing and Urban Development-Independent Agencies Appropriation Act for FY1981 authorized a $1.8 billion loan limitation—as opposed to an authorization via recapture of payments—to fund commitment contracts and purchases during FY1981 under the NHA Section 305 special assistance program, as well as additional obligations as necessary to meet prior years commitments. The fiscal year had already started October 1, 1980, so this authorization was effective upon enactment. The budget had requested $1.8 billion in mortgage purchase authority for FY1981, which was earmarked for the Section 8 Tandem program and, to a lesser extent, the Targeted Tandem program for middle-income housing in distressed urban areas. The enacted loan limit represents a decrease of $200 million in GNMA's commitment authority relative to current policy for the prior fiscal year, which we assign to the year starting December 1980.

The appropriations act also authorized GNMA to make new commitments of up to $53 billion in FY1981 to issue guarantees of mortgage-backed securities to carry out the purposes of Section 306 of the National Housing Act—the first statutory limitation of its kind. The 1981 budget had proposed subjecting all federal credit programs to annual reviews and authorizations through appropriations language (Senate Committee on Appropriations (1980), p. 5). Previously, commitments to issue guarantees had been authorized in such amounts as may be necessary to carry out the purposes of NHA Section 306, as amended. The authorization set by the Act matched the projected level of commitments and authorization request in the president's budget for FY1981 (The Budget for Fiscal Year 1981, Appendix, p. 524).

The FY1981 Budget also proposed a trial $30 million grant program to assist in the financing of multifamily home construction as "*an experimental shift from the current mode of financing targeted tandem projects—a tandem program involving the purchase and sale of mortgages—to an interest rate reduction approach... a grant would be given to the lender as compensation for making a below-market interest-rate mortgage loan... The capital grant may accomplish the same purpose, without ever having to purchase, hold, and subsequently sell the mortgage.*" The appropriations committees rejected the administration's proposed trial interest rate subsidy program, signaling a shift in housing policy priorities from social policy objectives to budgetary and inflationary concerns. The accompanying Senate committee report explained that "*decision to recommend against the implementation of this program in fiscal year 1981 is not intended to be a condemnation of the program or its merits. Rather the Committee believes that it*

[90]See accompanying House Committee on Banking report for complete history of Sec. 305(a) revisions to general special assistance authority (Report No. 96-799, p. 186).

is inappropriate to start a new program at a time when every effort is being made to eliminate the budget deficit as a means of fighting inflation." (Senate Committee on Appropriations (1980), p 17).[91]

The request for increased GNMA special assistance authority was made on January 28, 1980, early in the recession lasting from January through July 1980. The appropriations bill was enacted during the brief ensuing expansion before the more severe recession from July 1981 through November 1982. The 1981 Economic Report of the President noted that "*Housing and automobile sales were the key sectors of weakness, accounting for about two-thirds of this drop in final demand*" in the first recession (ERP 1981, p. 136). The report noted that "*Federal and related agencies provided only modest support to the mortgage market as compared with the last cyclical downturn*" (ERP 1981, p. 141), but also that the "*chief cyclical determinant of housing activity has become interest rates rather than credit availability. As events have demonstrated, however, [the development of secondary markets] did not insulate housing from tighter monetary conditions.*" Housing starts bottomed out in May 1980, but after a short summer rebound, weakness in the housing market remerged in the fourth quarter. The Economic Report of the President suggested that federal housing policies for multifamily construction were propping up overall housing starts following the summer rebound: "*Multifamily starts—which increased from September to November—were bolstered somewhat by Federal subsidy programs.*" (ERP 1981, pp. 171-172). Budgetary concerns reflected in the Act were also cyclically related. We thus classify the policy change as cyclically motivated.

Omnibus Budget Reconciliation Act of 1981 (Pub. L. 97-35) Enacted: August 13, 1981

The Act revised upwards the previous increase in GNMA's Section 305(c) general Presidential special assistance purchase authority from $900 million effective October 1, 1980 (Pub. L. 96-339) to an increase of $1.1 billion on October 1, 1981, again subject to an appropriations act, but without fiscal year limitation. The Act also capped special assistance authority to enter commitments to purchase mortgages under Section 305 of the Housing Act to a total aggregate principle of $1.973 billion for FY1982, with the caveat that no more than $580 million could be commitments for projects without some units assisted under Section 8.

The bill reflected considerable negotiation and compromise between the Republican controlled Senate and Democratic House majority: "*The House bill contained a provision to increase GNMA's mortgage purchase authority under the Special Assistance Functions by $1.1 billion on October 1, 1981. The Senate amendment contained a similar provision, except that it increased GNMA's authority by $2,300,000,000 on October 1, 1981, and provided that not more than $942,800,000 of that amount shall be available for the purchase of or commitments to purchase mortgages secured by projects which do not contain units assisted under sec. 8 of the U.S. Housing Act of 1937. The conference report contains the House provision... The House bill also included a provision not contained in the Senate bill providing that (1) during fiscal year 1982, GNMA may not enter into commitments to purchase mortgages, with an aggregate principal amount in excess of $1,973,000,000; and (2) that such amount shall not include any authority to enter into commitment which was authorized for use during fiscal year 1981 but was not utilized during such year. The conference report contains the first part of the House provision with an amendment to provide that, in addition, GNMA may not enter into commitments to purchase mortgages secured by projects which do not contain units assisted under sec. 8*" (**?**, p. 703). Because the increase was subject to an appropriations bill, we do not consider it unto itself a significant policy change affecting Ginnie's mortgage market activity.

[91] The 1981 Economic Report of the President had similarly emphasized the imperative that "*Our monetary and fiscal policies must apply steady anti-inflationary restraint to the economy*" (ERP 1981, p. 8).

Department of Housing and Urban Development-Independent Agencies Appropriation Act, 1982 (Pub. L. 97-101) Enacted: December 23, 1981

Policy Change	Agency	Impact	News	Effective	Classification
Special Assistance Increase	GNMA	+$0.173 billion	Dec. 1981	Oct. 1981	Cyclical

The Act set a special assistance loan limitation for funding commitment contracts and purchases under Section 305 of the Housing Act to a total aggregate principle of $1.973 billion for FY1982, in line with the OBRA of 1981 (see above). The 1982 budget had requested an increased loan limit of $3.6 billion, up from $1.8 billion, which was matched by the House bill but pared back by the Senate bill. The enacted loan limit represented an increase of $173 million in GNMA's commitment authority relative to current policy for the prior fiscal year, which we assign as an annualized increase starting in December 1981.

The higher unmatched request was intended "*to 'buy-out' the existing pipeline of project applications for insurance (FHA) which are being processed on the assumption that tandem financing would be available. Commitments issued in 1982 will be in support of section 8 and targeted tandem projects which were covered by applications for FHA mortgage insurance commitments submitted on or before February 13, 1981.*" Instead signaling a final wind-down of the Tandem programs, the enacted level was intended to cover "*applications that had the status of 'conditional in process' to 'firm commitment" for insurance purposes as of February 13, 1981.*" (Senate Committee on Appropriations (1981), p. 15).

The appropriations Act also increased GNMA authorizations to make new commitments to issue guarantees to carry out the purposes of Section 306 of the National Housing Act by $15.25 billion, up to $68.25 billion for FY1982. The 1982 budget had proposed credit control language limiting GNMA's commitments to guarantee MBS to $48 billion, which both the House and Senate were convinced "*could have a **negative effect on the already depressed housing industry***" (Senate Committee on Appropriations (1981), p. 16).

The bill was enacted in the midst of the recession lasting from July 1981 through November 1982, and the accompanying committee report language explicitly cited concerns about a depressed housing market. We thus classify the policy change as cyclically motivated.

Continuing appropriations for 1983 (Pub. L. 97-377) Enacted: December 21, 1982

Policy Change	Agency	Impact	News	Effective	Classification
Special Assistance Decrease	GNMA	-$1.473 billion	Dec. 1982	Oct. 1982	Cyclical

The continuing appropriations bill set a special assistance loan limitation for funding commitment contracts and purchases under Section 305 of the Housing Act to a total aggregate principle of $500 million for FY1983, to be paid from collections received. Of this, $250 million was for the targeted tandem program, and the other $250 million was for Section 8 construction projects (House Committee on Appropriations (1982a), p. 189). The enacted loan limit represented a decrease of $1.473 billion in GNMA's commitment authority relative to current policy for the prior fiscal year.

While the loan limitation amounted to decreased support for the housing and mortgage market relative to current policy, it appears to have been intended as stimulative in the sense of delaying the administration's imminent repeal of the program (see below). The accompanying House report stressed that the funds were intended to have a positive effect on construction employment: '***these funds will create construction jobs in as short a time as possible****. The projects are ready, for the most part, to go to construction in the next three to six months. In this connection, the Committee directs the Department to allocate the $500,000,000 included herein within 30 days of enactment of this joint resolution. It is expected that this level of funding* ***will generate approximately 15,000 jobs***" (House Committee on Appropriations (1982b), p. 8)

The bill was enacted just as the economy was bottoming out from the recession lasting from July 1981 through November 1982, and explicitly reflected immediate concerns about construction employment. We thus classify the policy change as cyclically motivated.

Supplemental Appropriations Act of 1984 (Pub. L. 98-181) Enacted: November 30, 1983

Policy Change	Agency	Impact	News	Effective	Classification
Repeal of Tandem Programs	GNMA	-$2.92 billion	Nov. 1983	Nov. 1983	Non-Cyclical

The Act repealed Sections 305 and 313 of the Federal National Mortgage Association Charter Act, which had authorized GNMA's general special assistance functions and emergency special assistance functions, respectively. Purchases and commitments to purchase mortgages pursuant to Sections 305 and 313 entered preceding this Act's enactment, as well as the servicing and disposition such mortgages, would continue to be governed by the provisions of such sections as they existed immediately before their repeal. Repeal was effective upon enactment.

At the time of repeal, the limitations on the various special assistance authorities authorized by Section 305 of the National Housing Act totaled $16.45 billion, including $6.475 billion for general special assistance authority (Section 305(c)), $225 million for advance commitment contracts related to cooperative housing under Section 213 of the NHA (Section 305(e)), $500 million for advance commitment contracts related to mortgages under the Armed Services Housing Mortgage Insurance program (Section 305(f)), and $1.75 billion for purchases and commitments authorized to be outstanding for mortgages insured under Title II of the NHA or guaranteed under the Servicemen's Readjustment Act of 1944 (Section 305(g)). And the HUD Secretary's authorization to instruct GNMA to purchase mortgages and enter commitments under Section 313 of the NHA had been limited to $7.5 billion outstanding at any given time.

The Reagan administration's budget for fiscal year 1984 had proposed winding down both subsidized special assistance programs and repealing their statutory authorizations, as later implemented by the Act.[92] Under existing law, the budget projected that outlays for GNMA's purchase activity would total $1.43 billion in FY1984 and $212 million in FY1985, but the administration's proposed legislation would instead result in negative outlays of -$842 million in FY1984 and -$1.038 billion for FY1985 (The Budget for Fiscal Year 1984, p. 5-57). Annualizing, we estimate the proposed elimination of the special assistance programs would reduce federal outlays by $875 million in the year

[92]"*For 1984, the administration proposes no further activity for the GNMA tandem mortgage subsidy programs. The statutory authority for these programs, which involves making direct loans at large losses to the Federal Government, is proposed for repeal. Contingent upon successful enactment of this proposal, outstanding Treasury borrowing for these programs will be forgiven, and the remaining fund balances transferred to the GNMA management and liquidating functions fund*" (The Budget for Fiscal Year 1984, p. 5-56).

starting November 1983.[93] By the nature of the program, special assistance purchase volumes were considerably larger than their associated appropriated outlays making up the difference between purchase and sale price. Based on the recent estimate that $150 million in net outlays supported $1 billion in special assistance purchases (see Pub. L. 95-392 above), we estimate that this reduction in outlays would reduce purchases by $5.83 billion ($-875 \times \frac{1000}{150} = -5{,}833$). Using the two-year rule, we assign an annualized decrease in GNMA's purchase capacity of $2.92 billion in the year starting November 1983.

The Reagan administration's efforts to pare back GNMA activity, particularly subsidized purchases, were part of a broader, widely recognized effort to shrink the government's active role in housing markets, and the GSEs in particular. The Reagan administration's budget for fiscal year 1983 had proposed reducing GNMA's guarantee commitment level by $20 billion (The Budget for Fiscal Year 1983, p. 5-66), and requested no new authorization for the tandem programs, though it stopped short of proposing a full repeal of their authorization. That budget had argued that reducing federal credit programs "*should relieve pressure on interest rates and lead to a sustainable and non-inflationary recovery of the mortgage finance and construction industries*" (The Budget for Fiscal Year 1983, p. 5-70). In October 1984, the President of the Mortgage Bankers Association had railed against the administration's 'ideological' effort to shrink the government, privatize, and deregulate: "*The Reagan administration's philosophy has shifted the allocation of federal government resources toward new priorities, intentionally or otherwise* ***diminishing the high social priority of housing in this country***" (The American Banker (10/18/1983)). Because the efforts to scale back Fannie and Freddie, and the more successful efforts to check Ginnie, were widely viewed as driven by political philosophy or long-term budgetary and economic aims, we classify this policy as unrelated to contemporaneous economic conditions.

Following the repeal of the general and emergency special assistance functions, Ginnie's role in mortgage markets was almost entirely confined to guaranteeing timely payment on pools of FHA/VA mortgages. Annual appropriations bills authorized Ginnie to enter commitments to guarantee mortgages up to a limit, and this statutory limitation was frequently changed in response to economic, budgetary, and social policy objectives. But because Ginnie guaranteed pools issued by third parties, this guarantee activity did not result in purchase or retained portfolio activity.

4.4 Federal Reserve

During the Great Recession and ensuing period of housing and financial market fragility, the Federal Reserve Board became the principal buyer of agency debt and a major holder of agency MBS. As of January 25, 2017, the Federal Reserve Bank held $1.745 trillion worth of agency MBS and $16.2 billion worth of federal agency debt securities, comprising 39.9% of the Federal Reserve System's $4.414 trillion balance sheet (FRB H.4.1).

FOMC Announcement: QE1 Launch Announced: November 25, 2008

Policy Change	Agency	Impact	News	Effective	Classification
QE1 Launch	Federal Reserve	+$250.0 billion	Nov. 2008	Dec. 2008	Cyclical

[93] As the Act took effect after the first two months of FY1984, we assume assume a 5/6-1/6 split between projected FY1984 and FY1985 impacts $\left(-842 \times \frac{10}{12} - 1038 \times \frac{2}{12} = -875\right)$.

The Federal Reserve announced on November 25, 2008 that it would initiate a program to purchase obligations of Fannie Mae, Freddie Mac, and the Federal Home Loan Banks, as well as MBS backed by Fannie Mae, Freddie Mac, and Ginnie Mae (or "agency MBS"). Noting that "*[s]preads of rates on GSE debt and on GSE-guaranteed mortgages have widened appreciably of late*," the Federal Reserve Board of Governors press release offered the following motivation: "*This action is being taken to* ***reduce the cost and increase the availability of credit for the purchase of houses, which in turn should support housing markets and foster improved conditions in financial markets*** *more generally*" (FOMC Statement: November 25, 2008). The Board of Governors initially authorized purchases of $100 billion worth of GSE debt obligations and up to $500 billion worth of agency MBS. The full schedule was of purchases was not announced, but were "expected to take place over several quarters," starting the following week, in early December. Given the uncertain duration and pace of purchases, we use the two-year rule and assign an annualized increase in the Federal Reserve's MBS purchases of $250 billion in November 2008. The policy announcement significantly affected interday trading volumes and yields on long-term bonds (Krishnamurthy and Vissing-Jorgensen (2011)).

This announcement marked the beginning of the first round of quantitative easing, or QE1, which would run from December 2008 through March 2010. The action was taken in the midst of the Great Recession and explicitly in response to a severe credit crunch, and is thus classified as cyclically motivated.

FOMC Statement: QE1 Expansion Announced: March 18, 2009

Policy Change	Agency	Impact	News	Effective	Classification
QE1 Expansion	Federal Reserve	+$750.0 billion	Mar. 2009	Mar. 2009	Cyclical

The Federal Reserve announced on March 18, 2009 that it would expand its purchases of agency MBS by $750 billion, and double its purchases of agency debt from $100 billion to $200 billion. The FOMC announced that the expanded MBS purchases would bring "*total purchases of these securities to up to $1.25 trillion* ***this year***" (FOMC Statement: March 18, 2009). The motivation for the expansion of the agency MBS program was "*To provide greater support to mortgage lending and housing markets*." The FOMC also announced it would purchase up to $300 billion worth of long-term Treasury securities within the next six months to help improve conditions in private credit markets. The policy announcement significantly affected interday trading volumes and yields on long-term bonds (Krishnamurthy and Vissing-Jorgensen (2011)).

Given the explicit projection that the MBS purchase program would be completed within the year, we do not invoke the two-year rule and instead assign an annualized increase in the Federal Reserve's MBS purchases of the full $750 billion in March 2009.

The FOMC statement noted that the economy was still contracting, and that "*Job losses, declining equity and housing wealth, and tight credit conditions have weighed on consumer sentiment and spending.*" The action was taken in the midst of the Great Recession and explicitly in response to a severe credit crunch and declining economic activity, and is thus classified as cyclically motivated.

FOMC Statement: Reduction of Agency MBS Program Announced: November 4, 2009

The FOMC announced that it was slowing the pace of both agency debt and MBS purchases, and that the expected volume of agency debt purchased would be $175 billion, down $25 billion from the previously announced target.

The FOMC offered the following explanation: "*The amount of agency debt purchases, while somewhat less than the previously announced maximum of $200 billion, is consistent with the recent path of purchases and reflects the limited availability of agency debt*" (FOMC Statement: November 4, 2009). The declaration in purchases was intended "*to promote a smooth transition in markets*" and purchases were projected to be completed by the end of 2010Q1. The overall intent of both asset purchase programs was "*To provide support to mortgage lending and housing markets and to improve overall conditions in private credit markets*."

Because the policy announcement did not affect the targeted volume of MBS purchases and only modestly extended the timing of purchases, we do not consider this a significant policy change for the MBS purchase program.

FOMC Statement: Conclusion of Agency MBS Program Announced: December 16, 2009

The FOMC announced that it was slowing the pace of agency debt and MBS purchases, and expected total purchases of $175 billion and $1.25 trillion respectively, to be concluded by the end of the first quarter of 2010. The statement reiterated the following motivation for the purchase program: "*To provide support to mortgage lending and housing markets and to improve overall conditions in private credit markets*" (FOMC Statement: December 16, 2009).

In total, the Federal Reserve purchased $432.3 billion worth of FHLMC MBS, $703.6 billion worth of FNMA MBS, and $114.0 billion worth of GNMA MBS, exhausting the entire $1.25 trillion MBS purchase commitment. And the Federal Reserve purchased $67.1 billion worth of FHLMC debt, $67.4 billion worth of FNMA debt, and $37.7 billion worth of FHLBank debt, leaving $2.9 billion of the $175 billion purchase commitment unused.

FOMC Statement: Reinvestment of Agency MBS Program Announced: August 10, 2010

The FOMC announced that it would maintain the present volume of the Federal Reserve's portfolio of securities held outright by reinvesting principal payments from agency debt and MBS into longer-term Treasury securities, in addition to rolling over the Federal Reserve's holdings of Treasury securities as they matured.

FOMC Statement: QE2 Launch Announced: November 3, 2010

The FOMC announced that it would purchase an additional $600 billion worth of longer-term Treasury securities at a pace of roughly $75 billion per month, to be concluded by the end of the second quarter of 2011. This announcement marked the beginning of the second round of quantitative easing, or QE2, which would run from November 2010 to June 2011.

FOMC Statement: Reinvestment of Agency MBS Program Announced: September 21, 2011

Policy Change	Agency	Impact	News	Effective	Classification
Agency MBS Reinvestment	Federal Reserve	+$262.0 billion	Sep. 2011	Sep. 2011	Cyclical

On September 21, 2011, the FOMC announced that the principal payments from its holdings of agency debt and MBS would be reinvested into agency MBS, instead of Treasury securities. The motivation behind the change was "*[t]o help support conditions in mortgage markets*" (FOMC Statement: September 21, 2011). The FOMC maintained its policy of rolling over maturing Treasury securities. The statement made clear that that housing market remained a far cry from health: "*Investment in nonresidential structures is still weak, and the housing sector remains depressed.*"

The Federal Reserve also announced that it would purchase $400 billion worth of longer-dated Treasury securities (6- to 30-year maturities) and sell an equal volume of Treasuries with maturities of under 3 years, a program coined 'Operation Twist.'

Market analysts at Morgan Stanley estimated that paydowns on the Fed's standing MBS portfolio could total $262 billion over the next twelve months, which was widely cited as an estimate of expected Fed demand for MBS as a result of the reinvestment program (Dow Jones Newswires (9/21/2011)). Financial newswires also that the Fed's MBS reinvestment program had come as a surprise. Dow Jones Newswires explained that "*The Fed decision to bolster the mortgage market surprised many traders and analysts who had been expecting the central bank would keep investing cash rolling off its existing portfolio into the Treasury market*" (Dow Jones Newswires (9/21/2011)).

Based on Morgan Stanley's projections, we score this policy as increasing the Fed's mortgage securities purchases by an annualized $262 billion starting in September 2011. Given the FOMC's stated concerns and objectives, we classify the agency MBS reinvestment program as cyclically and financially motivated.

FOMC Statement: QE3 Launch Announced: September 13, 2012

Policy Change	Agency	Impact	News	Effective	Classification
QE3 Launch	Federal Reserve	+$480.0 billion	Sep. 2012	Sep. 2012	Cyclical

On September 13, 2012, the FOMC announced that the Federal Reserve would purchase additional agency MBS at a pace of roughly $40 billion per month. No expected duration or total volume of purchases was announced for this round of asset purchases. The FOMC also announced that it would continue Operation Twist, and estimated that the two purchase programs would collectively amount to increasing the Federal Reserve's holdings of long-dated securities by roughly $85 billion per month. The stated objective was "*[t]o support a stronger economic recovery and to help ensure that inflation, over time, is at the rate most consistent with its dual mandate*," while noting that inflation was expected to remain below target over the medium term (FOMC Statement: September 13, 2012). The statement also noted that the "*housing sector has shown some further signs of improvement, albeit from a depressed level.*"

This announcement marked the beginning of the third round of quantitative easing, or QE3, which would run from September 2012 through October 2014. According to a Reuters poll, around 60% of financial economists and market analysts had been expecting the Fed to launch a third round of quantitative easing at this FOMC meeting, but the consensus had been that the Fed would announce a mix of Treasury bond and agency debt purchases, as opposed to increasing its MBS acquisitions (Business and Finance Daily News Service (9/13/2012)). The policy announcement significantly affected yields on long-term bonds in interday trading (Krishnamurthy and Vissing-Jorgensen (2011)). In light of the uncertain duration of QE3, we assume purchases would continue for at least one year, and score this policy as increasing the Fed's mortgage purchases by an annualized $480 billion for the year starting September 2012 ($\$40 \times 12 = \$480$)). Given the FOMC's stated concerns and objectives, we classify the launch of QE3 as cyclically and financially motivated.

FOMC Statement: QE3 Expansion Announced: December 12, 2012

The FOMC announced that the Federal Reserve would continue to purchase additional agency MBS at a pace of

roughly $40 billion per month, and would begin purchasing longer-dated Treasuries at a pace of $45 billion per month when Operation Twist was concluded at the end of December 2012.

FOMC Statement: QE3 Taper Announced: December 18, 2013

Policy Change	Agency	Impact	News	Effective	Classification
QE3 Taper	Federal Reserve	-$60.0 billion	Dec. 2013	Dec. 2013	Cyclical

The FOMC announced that it would slightly reduce the pace of its agency MBS purchases from $40 billion to $35 billion per month, and its purchase of Treasuries from $45 billion to $40 billion per month, starting in January 2014. The FOMC reaffirmed its policy of reinvesting the principal payments from its holdings of agency debt and MBS into more agency MBS and rolling over Treasuries. The decoration of purchases was made in "*light of the cumulative progress toward maximum employment and the improvement in the outlook for labor market conditions*" (FOMC Statement: December 18, 2013). The statement also noted that "*the recovery in the housing sector slowed somewhat in recent months*" and that "*[f]iscal policy is restraining economic growth*".

While talk of whether the Fed would 'taper' its bond buying program was rampant, *Market Watch* reported that only one out of four economists surveyed by the *Wall Street Journal*" the Friday before the announcement had "*predicted the Fed will scale back its bond buying at its December meeting*" (MarketWatch (12/18/2013)). We do not consider the Fed's $5 billion monthly reduction of MBS purchases to have been well anticipated by financial markets. In light of the uncertain duration of QE3, we assume the reduced pace of purchases would continue for at least one year, and score this policy as reducing the Fed's mortgage purchases by an annualized $60 billion (($35 - $40) × 12 = -$60)). Given the FOMC's stated concerns and objectives, we classify the launch of QE3 as cyclically motivated.

FOMC Statement: QE3 Termination Announced: October 29, 2014

The FOMC announced that it would end its current program of agency debt and MBS and Treasury securities at the end of October 2014, citing "*a substantial improvement in the outlook for the labor market since the inception of its current asset purchase program.*" (FOMC Statement: October 29, 2014). The FOMC again reaffirmed its policy of rolling over Treasuries and reinvesting the principal payments from its holdings of agency debt and MBS into more agency MBS. The announcement of the complete termination of QE3 had been widely expected and largely priced in. The *Financial Times* reported that "*The US central bank is widely forecast to announce the end of its third round of quantitative easing*" just ahead of the FOMC announcement (The Financial Times (10/29/2014)). We thus consider the termination of the Fed's MBS purchases under QE3 as a significant but a long anticipated policy change, and thus inappropriate as a policy instrument.

Between October 2011 and September 2015, the Federal Reserve's reinvestment of principal payments from holdings of agency debt and MBS and additional agency MBS purchases totaled $572.3 billion worth of FHLMC MBS, $1.015 trillion worth of FNMA MBS, and $451.1 billion worth of GNMA MBS, collectively totaling $2.039 trillion.

4.5 U.S. Treasury Department

Treasury Agency MBS Purchase Program Announced: September 7, 2008

Policy Change	Agency	Impact	News	Effective	Classification
MBS Purchase Program Launch	Treasury	+$80.0 billion	Sep. 2008	Sep. 2008	Cyclical

The Housing and Economic Recovery Act of 2008 (Pub. L. 110-289, enacted July 30, 2008) amended the FNMA Charter Act, FHLMC Act, and Federal Home Loan Bank Act to temporarily authorize the U.S. Treasury to purchase any volume of FNMA, FHLMC, or FHLBank obligations or securities authorized under their respective charters, conditional on the Secretary making an emergency determination that such purchases were necessary to "*(i) provide stability to the financial markets; (ii) prevent disruptions in the availability of mortgage finance; and (iii) protect the taxpayer.*" The Secretary of the Treasury was authorized to use the proceeds of the sale of any securities to finance such purchases. This emergency authority was scheduled to expire on December 31, 2009.

Concurrent with the FHFA taking FNMA and FHLMC into government conservatorship on September 7, 2008, the Treasury Department announced a GSE MBS Purchase Program to begin later that month. Treasury's stated objective behind the program was "*to broaden access to mortgage funding for current and prospective homeowners as well as to **promote market stability***" (Department of the Treasury (2008b)). The announcement did not contain specific amounts of the planned purchases but stated that the scale of the program will be based on developments in the capital markets and housing markets. The Fed's September 10, 2008 Greenbook stated that the Treasury's expected outlays for purchasing equity and MBS of Fannie and Freddie were highly uncertain, but estimated outlays of $20 billion in calendar 2008 and $60 billion in 2009 (September 10, 2008 Greenbook, p. I-6). Accordingly we assign an $80 billion expected annualized volume of agency MBS purchases under Treasury's program for the year starting September 2008.

In practice, the U.S. Treasury Department accumulated a portfolio of agency-guaranteed MBS of $192 billion between September 2008 and December 2009.

Under another HERA authorization, the Treasury Department, in conjunction with FHFA, HUD, Fannie Mae, and Freddie Mac also created an initiative in October 2009 to provide support to state and local Housing Financing Agencies (HFAs). This initiative was designed to support low mortgage rates and expand resources for low- and middle-income borrowers to purchase or rent homes, making them more affordable over the long term. In December 2009, two Treasury supported credit programs were launched as part of the HFA initiative: (i) the Temporary Credit and Liquidity Program (TCLP) and (ii) the New Issue Bond Program (NIBP). Treasury purchased a participation interest in the TCLP, which was a liquidity facility for outstanding HFA bonds administered by Fannie and Freddie. Under the NIBP program, Treasury purchased GSE securities backed by housing bonds issued by HFAs.

Emergency Economic Stabilization Act of 2008 (Pub. L. 110-343) Enacted: October 3, 2008

On September 20, 2008, the Treasury Secretary introduced a proposal to purchase mortgage-related assets up to a limit of $700 billion outstanding at any one time. This proposal had the support of the President, and negotiations with leaders in Congress commenced to draft appropriate legislation. A first attempt to pass a similar bill failed on September 28, sparking the largest stock market losses during trading on Monday, September 29 since Back Monday in 1987.

Congress quickly reversed course, and the Emergency Economic Stabilization Act of 2008 was enacted on October 3, 2008, creating the Office of Financial Stability within the Treasury Department to administer a $700 billion Troubled Asset Relief Program (TARP). The legislation included residential or commercial mortgages and any securities, obligations, or other mortgage-related instruments originated or issued before March 15 2008 in its statutory definition

of "troubled assets" eligible for purchase by the Treasury. The legislation limited the Secretary's authority to purchase troubled assets to: (1) $250 billion outstanding at any one time; (2) $350 billion outstanding at any one time if, at any time, the President certifies to Congress that the Secretary needs to exercise authority for up to such an amount; and (3) $700 billion outstanding at any one time if, at any time after such a certification, the President reports to Congress a plan of the Secretary to exercise the authority authority for up to such an amount, unless Congress enacts a joint resolution of disapproval within 15 calendar days of transmission of the plan. The total authorization of $700 billion in October 2008 was later reduced to $475 billion by the Dodd-Frank Wall Street Reform and Consumer Protection Act (Pub. L. 111-203, enacted July 21, 2010).

Contrary to its name, TARP funds were primarily used for a Capital Purchase Program, in which Treasury allocated $250 billion capital injected into a wide range of banks and recently rechartered bank holding companies (Treasury Bulletin December 2008 p. 6). The Capital Purchase Program was announced on October 14, 2008.

The Initial Report to Congress of the Office of the Special Inspector General for the TARP (SIGTARP) explained that the TARP authorization could have been spent on MBS originated or issued by March 14, 2008. That report also characterized the Capital Purchase Program as a departure from the legislation's 'original intent': "*According to the Interim Assistant Secretary for Financial Stability, 'Purchasing equity in healthy banks around the country would be a faster and more direct way to inject much-needed capital into the system and restore confidence compared with asset purchases." Treasury decided that healthy banks would be in the best position to increase the flow of credit in their communities. The decision to provide a direct infusion of capital into banks was widely seen as a shift in approach from the original understanding of purchasing troubled assets, which would have presumably involved the purchase of troubled mortgages or mortgage-backed securities. The former Treasury Secretary explained: 'Given the severity and magnitude of the situation, an asset purchase program would not be effective enough, quickly enough. Therefore we exercised the authority granted by Congress in this legislation to develop and quickly deploy a $250 billion capital-injection program, fully anticipating we would follow that with a program for troubled asset purchases*'" (SIGTARP (2009), p. 49).[94] The follow through never materialized, and TARP funds were not used for large scale purchases of troubled assets.

Wessel (2009) suggested that Bernanke and some of Paulson's staff strongly favored capital injections to troubled asset purchases, and Treasury Secretary Paulson had reportedly concluded that funds would have to be used for bank capitalizations the morning after the first failed TARP vote because "*buying toxic assets was going to take too long*" (Wessel (2009), pp. 227, 236). Paulson abruptly killed the idea of any troubled asset purchases in a December 11, 2008 press conference, announcing off-the-cuff that doing so "*was no longer 'the most effective way' to use the money... Instead, he said, the Treasury Department planed to use nearly all the money to shore up the capital foundation of the nation's banks and to try to get consumer lending going again*" (Wessel (2009), p. 243).

Consequently, we do not consider TARP to be a significant policy change affecting the Treasury Department's holding of mortgage securities, counter to its name and original intent. Authority to make new investments under the TARP program expired on October 3, 2010.

Treasury Agency MBS Purchase Program Sales Announced: March 21, 2011

[94] See SIGTARP (2009), pp. 29-35, for an overview of the legislative background and CPP authorization.

Policy Change	Agency	Impact	News	Effective	Classification
Unwinding MBS Program	Treasury	-$120.0 billion	Mar. 2011	Mar. 2011	Cyclical

On March 21, 2011, the Treasury announced it would start selling up to $10 billion in agency MBS per month, subject to market conditions. It was also announced that sales would begin that month. Given the outstanding MBS balance of $142 billion, Treasury cited that at this pace, "*the portfolio would be unwound in whole over approximately one year*" between sales and continued pay downs of $2 billion to $4 billion a month (Department of the Treasury (2011a), p. 1). Prior to March 2011, the Department's stated intent was to hold MBS securities to maturity (Department of the Treasury (2011b), p. 104). A Treasury official also announced that the MBS purchase program was expected to yield a profit of $15 billion to $20 billion for taxpayers (Dow Jones News Wire (3/21/2011a)).

We score the policy to change to active portfolio disposal as reducing the Treasury's MBS net purchases by an annualized $120 billion in the year starting March 2011 ($\$10 \times 12 = \$120$). The Treasury Department's announcement appeared to take market analysts by surprise, and Treasury yields fell in interday trading. The head of RBC Capital Markets' government bond trading desk claimed that "*The market was not prepared for this*" (Dow Jones News Wire (3/21/2011a)). The timing of the sale may also have been motivated by public debt outstanding approaching statutory debt ceiling limit; a Treasury official stated that the sale might delay the arrival of the ceiling, expected between April 15 and May 31, by several days (Dow Jones News Wire (3/21/2011b)).[95]

An accompanying Treasury Press Center FAQ addressed the motivation head-on: "*Selling MBS is consistent with the general pattern of Treasury divestment of financial assets acquired during 2008 and 2009 as part of the various financial stabilization programs. Aided by such programs, today, the* ***market for agency-guaranteed MBS has notably improved along with broader financial conditions since Treasury acquired the portfolio****. Additionally, Treasury's mission does not typically include managing a large mortgage portfolio*" (Department of the Treasury (2011a), p. 1).

The Treasury FAQ also emphasized that the MBS sales would have no impact on the scheduled wind down of the GSEs' retained portfolios: "*The Enterprises are currently in the process of gradually reducing the size of their retained portfolios at a pace of no less than 10 percent per year, as they agreed to do in the preferred stock purchase agreements between the Treasury and the Enterprises. Both Enterprises are on track to meet or exceed the scheduled reductions, and the Administration does not anticipate any changes to this policy*" (Department of the Treasury (2011a), pp. 2-3).

Given that the Treasury's sale was motivated by a reversal in cyclical economic conditions, we classify the MBS portfolio liquidation as principally cyclically motivated.

[95] While raising the debt ceiling was typically a politicized but pro forma matter, the Republican majority in the House of Representatives was demanding spending cuts in exchange for an increase, and after a protracted showdown the ceiling was eventually increased by the Budget Control Act of 2011 (Pub. L. 112-25, enacted August 2, 2011), a spending reduction measure.

5 Results

Table 2 lists the policy events resulting from the narrative analysis. Each intervention is described by the agency affected, by its annualized projected impact (in billions of US dollars), our determination of its news being made public, the timing of the policy becoming effective, and our classification of the policy's motivation. We document a total of 70 significant, quantifiable policy changes over 1968–2014. After aggregating to a monthly frequency, there are 49 months in which the news of an intervention is made public; of these, 28 are classified as cyclically motivated and 23 as non-cyclically motivated policy events. Both cyclically motivated and non-cyclically motivated policies are attributed to December 1982 and February 2008. In the sample that excludes the 2007/08 financial crisis by omitting interventions after December 2006, there are 15 cyclically motivated and 21 non-cyclically motivated policy events.

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Table 2: **Narrative Measures of Policy Changes**

Policy Description	Agency	Impact	News	Effective	Classification
HUDA 1968: Special Assistance	GNMA	+$0.25 billion	Aug. 1968	July 1969	Non-Cyclical
HUDA 1968: Increased Debt-to-Capital Ratio	FNMA	+$1.39 billion	Oct. 1968	Oct. 1968	Non-Cyclical
Increased Debt-to-Capital Ratio	FNMA	+$1.19 billion	Dec. 1969	Dec. 1969	Cyclical
HUDA 1969: Special Assistance	GNMA	+$0.75 billion	Dec. 1969	Dec. 1969	Cyclical
Treasury-Guaranteed Capitalization	FNMA	+$2.6 billion	Apr. 1970	Apr. 1970	Cyclical
EHFA 1969: Special Assistance	GNMA	+$0.38 billion	July 1970	July 1970	Cyclical
Conforming Mortgage Program Approval	FNMA	+$0.4 billion	Nov. 1971	Feb. 1972	Non-Cyclical
FHA/VA Tandem Authorization	GNMA	+$1.5 billion	Sep. 1973	Sep. 1973	Cyclical
FHA/VA Tandem Authorization	GNMA	+$3.3 billion	Jan. 1974	Jan. 1974	Cyclical
Subsidized Mortgage Purchase Program	FHLMC	+$1.5 billion	May 1974	May 1974	Cyclical
FHA/VA Tandem Authorization	GNMA	+$1.65 billion	May 1974	May 1974	Cyclical
HCDA 1974: Conforming Loan Limit	FNMA	+$1.14 billion	Aug. 1974	Aug. 1974	Non-Cyclical
HCDA 1974: Conforming Loan Limit	FHLMC	+$0.46 billion	Aug. 1974	Aug. 1974	Non-Cyclical
EHPA 1974: Tandem Program	GNMA	+$3.88 billion	Oct. 1974	Oct. 1974	Cyclical
FY1976 Approps: Tandem Program	GNMA	+$2.5 billion	Oct. 1975	Oct. 1975	Cyclical
HCDA 1977: Conforming Loan Limit	FNMA	+$4.82 billion	Oct. 1977	Oct. 1977	Non-Cyclical
HCDA 1977: Conforming Loan Limit	FHLMC	+$0.21 billion	Oct. 1977	Oct. 1977	Non-Cyclical
HCDA 1977: Tandem Program Expansion	GNMA	+$3.75 billion	Oct. 1977	Oct. 1977	Non-Cyclical
FY1979 Approps: Special Assistance	GNMA	+$1.0 billion	Sep. 1978	Oct. 1978	Non-Cyclical
HCDA 1978: Mortgagee Expansion	FHLMC	+$2.0 billion	Oct. 1978	May 1979	Non-Cyclical
FY1980 Approps: Special Assistance	GNMA	+$1.0 billion	Nov. 1979	Nov. 1979	Non-Cyclical
HCDA 1979: Conforming Loan Limit	FHLMC	+0.86 billion	Dec. 1979	Dec. 1979	Cyclical
FY1981 Approps: Special Assistance	GNMA	-$0.2 billion	Dec. 1980	Oct. 1980	Cyclical
ARM Program Approval	FHLMC	+$0.37 billion	May 1981	July 1981	Cyclical
ARM Program Approval	FNMA	+$0.4 billion	June 1981	Aug. 1981	Cyclical
Second Mortgage Program Approval	FNMA	+$5.0 billion	Sep. 1981	Nov. 1981	Cyclical
FY1982 Approps: Special Assistance	GNMA	+$0.17 billion	Dec. 1981	Oct. 1981	Cyclical
Increased Debt-to-Capital Ratio	FNMA	+$6.25 billion	Dec. 1982	Dec. 1982	Non-Cyclical
FY1983 Approps: Special Assistance	GNMA	-$1.47 billion	Dec. 1982	Oct. 1982	Cyclical
FY1984 Supp. Approps: Tandem Repeal	GNMA	-$2.92 billion	Nov. 1983	Nov. 1983	Non-Cyclical
Second Mortgage Program Approval	FHLMC	+$1.0 billion	Jan. 1986	Jan. 1986	Non-Cyclical
Decreased Debt-to-Capital Ratio	FNMA	-$2.7 billion	Apr. 1987	Dec. 1987	Non-Cyclical
Public Listing Stock Split Capitalization	FHLMC	+$1.62 billion	Nov. 1988	Nov. 1988	Non-Cyclical
FHEFSSA 1992: Capital Requirements	FNMA	-$4.25 billion	Mar. 1990	Mar. 1990	Non-Cyclical
Affordable Housing Goals of 1992	FNMA	+$1.0 billion	July 1991	Jan. 1993	Non-Cyclical
Affordable Housing Goals of 1992	FHLMC	+$0.75 billion	July 1991	Jan. 1993	Non-Cyclical
Affordable Housing Goals of 1995	FHLMC	+$0.61 billion	Dec. 1995	Jan. 1996	Non-Cyclical
Affordable Housing Goals of 2000	FNMA	+$24.4 billion	July 1999	Jan. 2001	Non-Cyclical
Affordable Housing Goals of 2000	FHLMC	+$24.4 billion	July 1999	Jan. 2001	Non-Cyclical
Affordable Housing Goals of 2004	FNMA	+$7.6 billion	Apr. 2004	Jan. 2005	Non-Cyclical
Affordable Housing Goals of 2004	FHLMC	+$7.6 billion	Apr. 2004	Jan. 2005	Non-Cyclical
Accounting Scandal: Capital Surcharge	FNMA	-$141.4 billion	Sep. 2004	Sep. 2004	Non-Cyclical
Portfolio Growth Limit Imposed	FNMA	-$86.1 billion	May 2006	May 2006	Non-Cyclical
Portfolio Growth Limit Imposed	FHLMC	-$42.8 billion	June 2006	July 2006	Non-Cyclical
Portfolio Limit Increase	FNMA	+$17.15 billion	Sep. 2007	Sep. 2007	Cyclical
Portfolio Limit Increase	FHLMC	+$2.14 billion	Sep. 2007	Sep. 2007	Cyclical

Policy Description	Agency	Impact	News	Effective	Classification
ESA 2008: Jumbo Loan Limit	FNMA	+$41.57 billion	Feb. 2008	Apr. 2008	Cyclical
ESA 2008: Jumbo Loan Limit	FHLMC	+$41.57 billion	Feb. 2008	Apr. 2008	Cyclical
Removal of Portfolio Limit	FNMA	+$9.28 billion	Feb. 2008	Mar. 2008	Non-Cyclical
Removal of Portfolio Limit	FHLMC	+$9.05 billion	Feb. 2008	Mar. 2008	Non-Cyclical
Reduced Capital Surcharge	FNMA	+$53.33 billion	Mar. 2008	Mar. 2008	Cyclical
Reduced Capital Surcharge	FHLMC	+$43.33 billion	Mar. 2008	Mar. 2008	Cyclical
Reduced Capital Surcharge	FNMA	+$17.75 billion	May 2008	May 2008	Cyclical
HERA 2008: Jumbo Loan Limit	FNMA	-$13.34 billion	July 2008	Jan. 2009	Cyclical
HERA 2008: Jumbo Loan Limit	FHLMC	-$13.34 billion	July 2008	Jan. 2009	Cyclical
Conservatorship: Portfolio Limit Increase	FNMA	+$67.5 billion	Sep. 2008	Sep. 2008	Cyclical
Conservatorship: Portfolio Limit Increase	FHLMC	+$66.75 billion	Sep. 2008	Sep. 2008	Cyclical
Agency MBS Program Launch	Treasury	+$80.0 billion	Sep. 2008	Sep. 2008	Cyclical
QE1 Launch	Fed	+$250.0 billion	Nov. 2008	Dec. 2008	Cyclical
ARRA 2009: Jumbo Loan Limit	FNMA	+$13.34 billion	Feb. 2009	Feb. 2009	Cyclical
ARRA 2009: Jumbo Loan Limit	FHLMC	+$13.34 billion	Feb. 2009	Feb. 2009	Cyclical
HASP: Portfolio Limit Increase	FNMA	+$50.0 billion	Feb. 2009	May 2009	Cyclical
HASP: Portfolio Limit Increase	FHLMC	+$50.0 billion	Feb. 2009	May 2009	Cyclical
QE1 Expansion	Fed	+$750.0 billion	Mar. 2009	Mar. 2009	Cyclical
Agency MBS Program Sales	Treasury	-$120.0 billion	Mar. 2011	Mar. 2011	Cyclical
Agency MBS Reinvestment	Fed	+$262.0 billion	Sep. 2011	Sep. 2011	Cyclical
Third SPSPA Amendment	FNMA	-$22.16 billion	Aug. 2012	Aug. 2012	Non-Cyclical
Third SPSPA Amendment	FHLMC	-$22.16 billion	Aug. 2012	Aug. 2012	Non-Cyclical
QE3 Launch	Fed	+$480.0 billion	Sep. 2012	Sep. 2012	Cyclical
QE3 Taper	Fed	-$60.0 billion	Dec. 2013	Dec. 2013	Cyclical

Acronyms (in chronological appearance): Housing and Urban Development Act (HUDA); Emergency Home Finance Act (EHFA); Housing and Community Development Act (HCDA); Emergency Home Purchase Act (EHPA); fiscal year (FY); Federal Housing Enterprises Financial Safety and Soundness Act (FHEFSSA); Economic Stimulus Act (ESA); Mortgage-backed securities (MBS); Housing and Economic Recovery Act (HERA); quantitative easing (QE); American Recovery and Reinvestment Act (ARRA); Home Affordability and Stability Plan (HASP); and Senior Preferred Stock Purchase Agreements (SPSPA).

Table 3 Glossary of Acronyms Used

AHP	affordable housing programs
ARMs	adjustable-rate mortgages
ARRA	American Recovery and Reinvestment Act of 2009
CBO	Congressional Budget Office
CRS	Congressional Research Service
ESA	Economic Stimulus Act of 2008
FDIC	Federal Deposit Insurance Corporation
FHA	Federal Housing Administration
FHEFSSA	Federal Housing Enterprises Financial Safety and Soundness Act of 1992
FHFA	Federal Housing Finance Agency
FHFB	Federal Housing Finance Board
FHLBS	Federal Home Loan Bank System
FHLMC	Federal Home Loan Mortgage Corporation
FIRREA	Financial Institutions Reform, Recovery, and Enforcement Act of 1989
FNMA	Federal National Mortgage Association
FOMC	Federal Open Market Committee
FSLIC	Federal Savings and Loan Insurance Corporation
FY	fiscal year
GAAP	generally accepted accounting principles
GAO	Government Accountability Office
GNMA	Government National Mortgage Association
GSE	government-sponsored enterprise
HERA	Housing and Economic Recovery Act of 2008
HMDA	Home Mortgage Disclosure Act of 1975
HOLC	Home Owners' Loan Corporation
HUD	Department of Housing and Urban Development
JCT	Joint Committee on Taxation
LTV	loan-to-value ratio
MBS	mortgage-backed security
NHA	National Housing Act of 1934
NYSE	New York Stock Exchange
OFHEO	Office of Federal Housing Enterprise Oversight
PCs	participation certificates
QE	quantitative easing
REMICs	real estate mortgage investment conduit
RFC	Reconstruction Finance Corporation
RTC	Resolution Trust Corporation
S&Ls	savings and loan associations
SEC	Securities and Exchange Commission
SPSPA	Senior Preferred Stock Purchase Agreements
TARP	Troubled Asset Relief Program
TRA	Tax Reform Act of 1986
UPB	unpaid principal balance
VA	Veterans Administration/Department of Veterans Affairs