Blueprint for Restoring Safety and Soundness to the GSEs

June 2017

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This memorandum provides a detailed plan (the "Blueprint") for restoring safety and soundness to Fannie Mae and Freddie Mac while protecting taxpayers and maintaining stability in the secondary mortgage market. This Blueprint was developed by Moelis & Company LLC as financial advisors to certain non-litigating preferred stockholders of Fannie Mae and Freddie Mac.

This Safety and Soundness Blueprint:

1. **Protects Taxpayers from Future Bailouts.**

   This Blueprint protects taxpayers by restoring safety and soundness to two of the largest insurance companies in the United States, Fannie Mae and Freddie Mac. This is achieved by (a) rebuilding a substantial amount of first-loss private capital, (b) imposing rigorous new risk and leverage-based capital standards, (c) facilitating the government's exit from ownership in both companies, and (d) providing a mechanism to substantially reduce the government's explicit backstop commitment facility over time.

2. **Promotes Homeownership and Preserves the 30-Year Mortgage.**

   This Blueprint ensures that adequate mortgage market liquidity is maintained, the GSE debt markets continue to function without interruption, and the affordable 30-year fixed-rate conventional mortgage remains widely accessible for every eligible American.

3. **Repositions the GSEs as Single-Purpose Insurers.**

   Given the substantial reforms implemented by the Federal Housing Finance Agency ("FHFA") since 2008, the GSEs can now be repositioned and safely operated as single-purpose insurers, bearing mortgage credit risk in exchange for guarantee fees with limited retained investment portfolios beyond that necessary for securitization "inventory" and loan purchases.

4. **Enables Rebuild of Equity Capital while Winding Down the Government Backstop.**

   The Net Worth Sweep served the purpose of dramatically accelerating the payback of Treasury's investment in both companies. The focus must now turn to protecting taxpayers by rebuilding Fannie Mae's and Freddie Mac's equity capital and winding down the government's backstop.

5. **Repays the Government in Full for its Investment during the Great Recession.**

   Treasury has retained all funds received to date during the conservatorships. The government has recouped the entire $187.5 billion that it originally invested, plus an additional $78.3 billion in profit, for total proceeds of $265.8 billion. Treasury's profits to date on its investment in the GSEs are ***five times*** greater than the combined profit on all other investments initiated by Treasury during the financial crisis.

6. **Produces an Additional $75 to $100 Billion of Profits for Taxpayers.**

   Treasury can realize an estimated $75 to $100 billion in additional cash profits by exercising its warrants for 79.9% of each company's common stock and subsequently selling those shares through secondary offerings. This monetization process, which follows the proven path of Treasury's AIG and Ally Bank (GMAC) stock dispositions, could bring total government profits to $150 to $175 billion, the largest single U.S. government financial investment return in history.

7. **Implements Reform Under Existing Authority.**

   This Blueprint articulates a feasible path to achieving the Administration's GSE reform objectives with the least amount of execution risk. It can be fully implemented during the current presidential term by FHFA in collaboration with Treasury utilizing their existing legal authorities. Congress could build on these reforms to develop an integrated national housing finance policy that accounts for the Federal Housing Administration, the Department of Veterans Affairs, and Rural Housing Service, and emphasizes (i) affordable housing, (ii) safety and soundness, and (iii) universal and fair access to mortgage credit for all Americans.

Executive Summary

The Administration has clearly stated its goals for GSE reform – taxpayer protection and maintaining mortgage market liquidity and stability. There is an achievable and effective means of achieving these goals, utilizing proven in-place processes within this Administration's current term. This Blueprint provides a detailed path forward, incorporating elements of current leading industry proposals such as: building safe and sound capital levels at the GSEs to protect taxpayers; relying on existing infrastructure – as opposed to new and untested systems – to ensure stability and liquidity in the mortgage markets; continuing existing regulatory reforms enacted under the Housing and Economic Recovery Act ("HERA") so that the GSEs can never revert to their pre-crisis investment business models; and preserving core GSE functions (e.g., duty to serve, affordable housing goals, level playing field for originators) to ensure that access to homeownership for middle-class and working-class Americans remains intact access to homeownership remains intact.

Protect Taxpayers

Successful housing finance reform cannot put taxpayers at risk. The end-state system must be one that is "absolutely safe," where Fannie Mae and Freddie Mac cannot "get taken over again."[1]

Maintain Mortgage Liquidity and Stability

Any comprehensive reform must not "eliminate capital from the housing market," and must preserve housing market liquidity by maintaining the availability of the 30-year fixed-rate conventional mortgage.[2]

The approach outlined in this Blueprint brings a shareholder perspective to the ongoing policy discussion. Our goal is to facilitate an end to ongoing litigation on positive terms for all stakeholders, not the least of which is the government (and thereby the American taxpayer) which owns warrants that can be realized for value on the order of an additional estimated $75 to $100 billion.

This approach is unique in its feasibility. It lays out a clear path to build safe and sound levels of capital in less than four years at the GSEs using existing legal authority, and facilitates the development and implementation of additional housing finance reform through congressional action. Furthermore, this Blueprint represents the first proposal based on detailed financial projections and analysis, and establishes a reference point for any discussion of capital requirements, corporate valuation, issuance mechanics, and government exit timeline and profitability projections.

This Blueprint provides a clear and pragmatic path to achieve important public policy goals in a manner that will both protect taxpayers for years to come and respects the property rights of shareholders. Ending the GSE conservatorship and putting Fannie Mae and Freddie Mac on sound footing remains the final piece of outstanding crisis-era financial reform.

We welcome the opportunity to be a part of the solution.

Overview of the Safety and Soundness Blueprint

This Blueprint would build capital at Fannie Mae and Freddie Mac as shareholder-owned insurers, refocused on their core conventional mortgage guarantee business, substantially de-levered, and held to the highest regulatory standards. Key Blueprint components include:

Capital Build

The Blueprint envisions a robust capital build, up to a total of $155 to $180 billion of core capital, through a combination of retained earnings, existing shareholder participation (e.g., conversion and/or participation in a rights offering), and third-party primary equity raises.

Enhanced Capital Standards

The Blueprint envisions a three-pronged approach to establishing robust minimum capital requirements, with a risk-based capital minimum (8.5% of risk-weighted assets), leverage ratio requirements (3.0% of total assets, and 5.0% of total assets when credit risk transfer outstanding to third-parties is included in the calculation of capital), and stress testing (providing an additional layer of oversight relative to the pre-crisis regulatory regime).

These illustrative capital requirements, which equate to roughly four times the GSEs' pre-crisis requirements, are broadly consistent with approaches applied to other large financial institutions, and represent reasonable estimates of capital standards for the Enterprises. The Blueprint uses an open–architecture capital raising model that is flexible by design and can easily accommodate increases or decreases to regulatory capital requirements which would be established by the FHFA.

Government Exit from Ownership

Under the Blueprint, Treasury retains all $266 billion that it has received to date from both companies. Treasury also retains and exercises its warrants for 79.9% of common stock and sells its common shares through secondary offerings in 2019 and 2020. This process follows the proven path of Treasury's AIG and Ally Financial (GMAC) stock dispositions, and is estimated to generate $75 to $100 billion in additional cash proceeds, raising total government profits to as high as $175 billion.

Wind Down of Taxpayer Support

The Blueprint does not envision an open-ended government guarantee, but instead utilizes the existing framework of explicit but limited government support to maintain market stability without necessitating new legislation as a prerequisite. The existing PSPA commitments are transformed into catastrophic support protected by $155 to $180 billion in subordinated private capital, for which Treasury is paid a market-based commitment fee.

Further, the Blueprint provides a plan to partially wind down these PSPA commitment facilities over time. This wind down would be effectuated first by reducing the size of the commitment line as permanent equity capital is built, and then by implementing a mechanism that transfers a portion of Treasury's catastrophic risk to the insurance markets via reinsurance of the PSPA commitment line.

Strengthened Regulatory Oversight

In addition to imposing substantially enhanced capital standards, the Blueprint continues existing GSE reforms that have de-risked the Enterprises. This includes the continued wind down of the GSEs' investment portfolios (focusing the companies on their core mortgage guarantee business), and use of capital markets and insurance risk-transfer structures (reducing risk in their guarantee portfolio). Further, the Blueprint maintains a strong independent regulator, the FHFA, and grants them the continued oversight of guarantee fees.

Continuity of Existing Infrastructure, and Responsibilities

The Blueprint preserves the To-Be-Announced ("TBA") market, ensuring the continued availability of America's most popular, and affordable, mortgage product – the 30-year fixed-rate conventional mortgage. It also maintains core GSE functions (e.g., the duty to serve and affordable housing goals, which are crucial to middle-class and working-class access to homeownership), and preserves existing GSE operational infrastructure and corporate structures. Together with reduced ongoing support, this infrastructure will ensure stability in the approximately $5 trillion market for GSE mortgage-backed securities and agency debt.

Shareholder Support

Importantly, this Blueprint does not envision that the government will write a check or otherwise transfer funds to any shareholders or to the Enterprises. The financial markets, and not the government, should determine the appropriate value of privately held shares of Fannie Mae and Freddie Mac in the context of a capital building plan that meets the government's policy goals. In fact, existing shareholders representing substantial private capital are prepared to help the GSEs build capital as outlined in this Blueprint.

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Background

Historical Context

Since the creation of Fannie Mae in 1938 by President Franklin Roosevelt, the GSEs (commonly known as Fannie Mae and Freddie Mac) have helped millions of Americans achieve their dream of owning a home, irrespective of (i) where they lived, (ii) whether they were middle-class or working-class, and (iii) the relative strength of the U.S. economy. Fannie Mae and Freddie Mac accomplish this by providing essential countercyclical liquidity to the mortgage market. The companies purchase conforming mortgage loans from originators and then securitize these loans for sale to private investors while guaranteeing the credit risk in those securitizations. Over many decades, this funding has helped create and sustain strong neighborhoods and has enabled an accumulation of wealth that could be passed from one generation of Americans to the next.

Indeed, for most of their history, the GSEs prudently adhered to this core mission. However, regulatory changes in the 1990s allowed for an expansion of the GSEs' investment portfolios which caused the companies to become overleveraged and undercapitalized.[3] In 2008, when the collapse of the U.S. housing market led to a global financial crisis, the GSEs were forced into a "temporary" conservatorship that has now entered its ninth year.

Enactment of HERA

The Housing and Economic Recovery Act ("HERA") was enacted in July 2008, just as the financial crisis intensified, but this was too late to adequately remedy the GSEs' existing undercapitalization.[4] HERA was modeled on the Federal Deposit Insurance Act ("FDIA"), providing the new Federal Housing Finance Agency ("FHFA") with the same legal powers that the Federal Deposit Insurance Corporation ("FDIC") has successfully employed for decades to address bank undercapitalization through strong regulatory oversight directives, enforcement actions, management changes, and if necessary, conservatorships or receiverships.

While there was too little time to use many of these authorities to remediate the GSEs' financial problems before the financial crisis hit full force in September 2008, FHFA used its new authority under HERA to force the GSEs into conservatorship, appointing itself as conservator. Under the framework laid out in HERA, the conservatorships for Fannie Mae and Freddie Mac, like those used for banks under the FDIA, were intended to be short-term proceedings. The framework was designed to either rehabilitate the GSEs by rebuilding their capital bases and returning them fully to stockholder control or, if the GSEs could not be rehabilitated, to place them into receivership so their assets could be liquidated and distributed to creditors and stockholders.

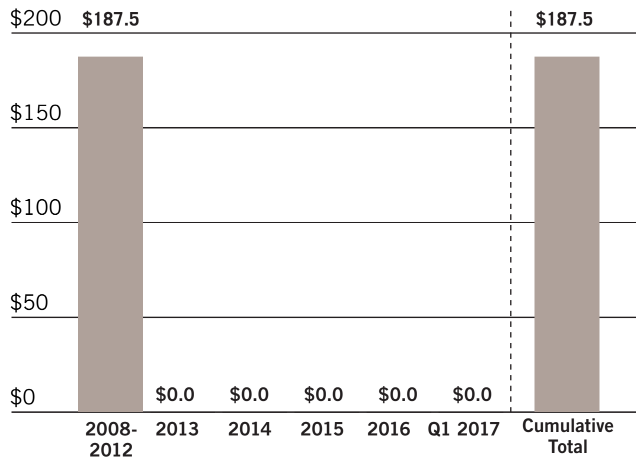
During conservatorship, Treasury invested $187.5 billion in the GSEs. The HERA statute explicitly directed the conservator, the FHFA, to "preserve and conserve" the GSEs' assets in order to return them to "sound and solvent" condition.[5]

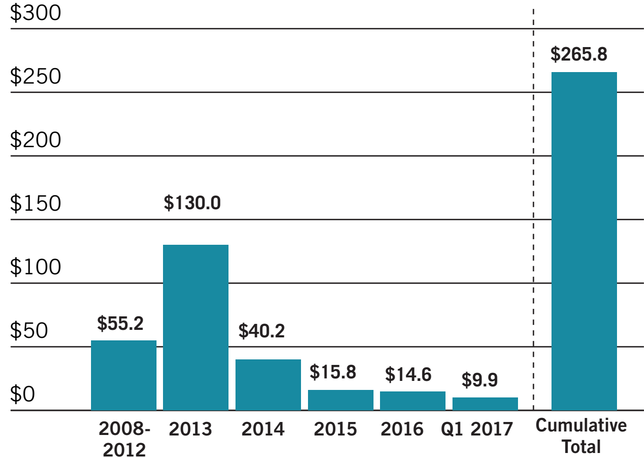
The Net Worth Sweep

By mid-2012, less than four years after FHFA appointed itself as Conservator, these shareholder-owned companies had returned to consistent and substantial profitability. As of the end of the first quarter of 2017, the GSEs have returned $265.8 billion to Treasury, nearly $80 billion in excess of Treasury's investment prior to consideration of Treasury's 79.9% stake in each of the Enterprises.

The vast majority of the GSEs' payments to the government are the result of a substantial change to the terms of the Senior Preferred Stock Purchase Agreement by the Treasury and FHFA, an arrangement commonly referred to as the Net Worth Sweep.[6] While the Net Worth Sweep expedited the repayment of the $187.5 billion advanced by Treasury, it strips the GSEs of their entire net worth on a quarterly basis and makes rebuilding capital – a core statutory objective of the conservatorship – impossible. Thus, despite the GSEs massive and sustained profitability, the Net Worth Sweep has caused the companies to operate with almost no capital and in an inherently unsound condition, leaving taxpayers fully exposed to the risk of having to potentially inject more money to support otherwise healthy companies.

Figure 1: Consolidated GSE Treasury Draws and Dividends Paid
$ Billions





Source: Company filings, Bloomberg

Current Political Landscape

While many stakeholders, policy analysts, and lawmakers have offered reform proposals in recent years, none have garnered broad bipartisan support. Many of these proposals seek to dismantle the GSEs and replace their operations with complex and untested mortgage funding structures that could easily disrupt the national housing finance market. This is a risk that homebuyers and taxpayers cannot afford.

Fortunately, HERA provides FHFA with the legal authority and a clear mandate to reform the GSEs. In fact, FHFA has already used that authority to dramatically strengthen Fannie Mae and Freddie Mac's operations such that the companies today look materially different than they did in 2008. In the period prior to the financial crisis, it was the Enterprises' large investment portfolios, not their core guarantee business, that caused questions to arise about their financial health. FHFA has effectively ended those investment businesses at Fannie Mae and Freddie Mac, as their retained portfolios have been substantially reduced since 2008.

The impetus for the conservatorship of Fannie Mae and Freddie Mac was each company's inadequate capitalization. However, as a result of the Net Worth Sweep, Fannie Mae and Freddie Mac are today far more critically undercapitalized than they were heading into the financial crisis. The companies have a combined $1.2 billion in net worth, less than 0.1% of their $5 trillion balance sheets. This amount is scheduled to be reduced to zero at the beginning of 2018 which means that Treasury, and ultimately the taxpayer, will be fully exposed to any potential future losses at the GSEs.

FHFA Director Mel Watt has described the current lack of capital as "the most serious risk" related to the GSEs and the risk with the most "potential for escalating in the future."[7] Director Watt has also expressed concern that the GSEs pervasive lack of capital "could erode investor confidence," and in turn could "stifle liquidity in the mortgage-backed securities market and could increase the cost of mortgage credit for borrowers."[8]

FHFA Director
Mel Watt
February 2016

"The most serious risk, and the one that has the most potential for escalating in the future is the Enterprises' lack of capital"

Treasury Secretary Steven Mnuchin has stated that "get[ting] Fannie and Freddie out of government ownership" is an important priority for this Administration and has laid out two key principles for housing finance reform: first, that the end-state system must be "absolutely safe," ensuring that Fannie and Freddie cannot "get taken over again," and second, that reform must preserve the availability of the 30-year fixed-rate conventional mortgage and not "eliminate capital for the housing market."[9]

Treasury Secretary
Steve Mnuchin
April 2017

"We can't put taxpayers at risk. We can't have a system where we have a bailout of housing finance"

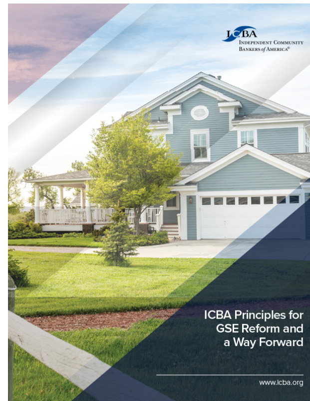
"... liquidity in the 30 year mortgage, that's been very important for the middle income in terms of being able to have homeownership"

Leading industry groups such as the Independent Community Bankers Association ("ICBA") have echoed the calls from FHFA and Treasury for enhanced capital, stability and liquidity. The ICBA's key reform principles include that the GSEs "must be allowed to rebuild their capital buffer," that "capital liquidity, and reliability are essential," and that the "TBA market for GSE MBS (mortgage-backed securities) must be preserved."[10]

ICBA: Principles for GSE Reform and a Way Forward

Principles for GSE Reform

- The GSEs must be allowed to rebuild their capital buffers
- Capital, Liquidity, and reliability are essential
- The TBA market for GSE MBS must be preserved



The Mortgage Bankers Association ("MBA") agrees, highlighting the need to "protect taxpayers by putting more private capital at risk … establish strong capital standards and enhanced regulatory powers," and "maintain the liquidity and stability of the primary and secondary mortgage markets" among its core principles. The MBA further supports preservation "where possible [of] the existing infrastructure" to ensure minimal market disruption, another principle with which we wholeheartedly agree.[11]

MBA: GSE Reform – Creating a Sustainable, More Vibrant Secondary Mortgage Market

PRINCIPLES

We believe that all GSE reform options should be evaluated and measured against these core principles. Working from these principles, MBA's proposal is for a new government-guaranteed secondary market "end state" that would advance the following critical policy objectives

- Maintain the liquidity and stability of the primary and secondary mortgage markets
- Protect taxpayers by putting more private capital at risk through expanded front- and back-end credit enhancements
- Establish strong capital standards, and enhanced regulatory powers to ensure a sound and stable secondary market system

By following the letter and respecting the spirit of HERA, the government has the compelling opportunity to put the GSEs on sound financial footing, resolve the longstanding conservatorship, and realize a substantial additional profit for taxpayers. The framework discussed herein lays out a financially grounded approach for transitioning the GSEs to single-purpose insurers with robust capital requirements sufficient to gradually reduce the government's exposure as backstop provider. The reformed system that emerges will preserve – and perhaps expand upon – current access to homeownership and the duty to serve Americans seeking affordable housing.

The Safety and Soundness Blueprint

Any GSE reform plan that does not specifically confront the practical realities of (i) prudent regulatory capital requirements, (ii) the process of raising substantial private capital, and (iii) the construct of protecting taxpayers by having private GSE investors bear mortgage credit risk, will remain a mere wish-list. A detailed, realistic Blueprint is needed.

This Blueprint was developed by Moelis & Company LLC and legal advisors working on behalf of large institutional investors who are prepared to lead GSE shareholders in discussions about supporting and contributing to the success of specific negotiated plans to restore the Enterprises to safety and soundness.

Safety and Soundness Within Four Years

Fannie Mae and Freddie Mac can successfully achieve safety and soundness within a four-year period. Capital can be built up to levels that are consistent with the rigorous prudential standards applied to other regulated financial institutions. As part of an exit from conservatorship, an enhanced regulatory framework would be implemented to ensure that taxpayers will never again have to provide direct financial support to the GSEs. Ongoing government support would be limited to a catastrophic guarantee which would only be at risk once all private capital was exhausted and which could be wound down over time. The government would fully exit its ownership position taking taxpayer assets "off the table" against future risk and allowing these assets to be dedicated to other administrative priorities.

Our Blueprint is the only plan released to date that recognizes the true value of the GSEs to the American taxpayer. Fannie Mae and Freddie Mac have already contributed to the taxpayer nearly $80 billion in profits, making them by far the most successful U.S. government financial investment of all time. This profit can more than double under a feasible capital raise plan, capturing future profits through monetization of the taxpayers' 79.9% stake in the GSEs' common stock. This sale of the government's ownership stake is expected to raise an estimated $75 to $100 billion in incremental profits. Under our Blueprint, Treasury's disposition would take the form of a series of secondary stock offerings in 2019 and 2020 following Treasury exit precedents such as AIG, Ally Financial and other TARP investments.

The GSEs Need Private Capital Now

The U.S. needs a vibrant private mortgage market in which innovation and product development can thrive, and can further enhance housing options for all Americans.

While the government's senior preferred stock and warrants represent equity interests in the GSEs, their value must be measured in terms of the overriding policy interests of U.S. homebuyers and taxpayers. The ongoing nationalization of the GSEs cannot achieve that goal and is inconsistent with the principles that have historically made America's mortgage markets thrive.

Beginning to build private capital now, instead of waiting for legislation that may not be enacted before Treasury has to advance additional funds to the GSEs, is absolutely necessary to maintain the integrity of the secondary mortgage market. A secondary market that depends solely on a backstop line of credit provided by the Treasury is dangerous to U.S. taxpayers, the housing sector, and ultimately the economy as a whole. As a result of the Net Worth Sweep, Fannie Mae and Freddie Mac have almost no loss absorbing capital despite nearly six consecutive years of highly profitable operations. As such, another "draw" on the Treasury's commitment line is very possible in the near term. This could be precipitated by a reduction in the U.S. corporate income tax rate (which would have the effect of lowering the value of deferred tax assets on both Fannie and Freddie's balance sheets), or by the GSEs incurring non-cash charges (such as those from occasional timing mismatches between the book value of assets and the market value of interest rate hedging instruments).

The Building Blocks of Private Capital

Raising sufficient capital to protect taxpayers is achievable during the current presidential term. Commentators who have stated that the problem is "just too big" to solve in a few years have focused solely on retained earnings of the Enterprises and have failed to consider the many other tools that are readily available to build capital.

Our Blueprint recognizes the availability of multiple sources of private capital. Specifically, $155 to $180 billion in core capital is raised and retained through a combination of:

1. Retained Earnings

Fannie Mae and Freddie Mac produce net income (post-tax) projected at over $15 billion per year on a combined basis.[i] Lock-boxing these earnings will allow the GSEs to retain over $60 billion in net income through fiscal year 2020, building a solid foundation of common stockholders' equity.

2. Conversion of Preferred Stock into Common Stock

Conversion of some or all of the existing $33 billion junior preferred stock into common stock is one mechanism by which existing investors can help ensure successful execution of a capital build by leveling the playing field and demonstrating confidence in the long-term viability of the restructured companies.

3. New Capital from Existing Stockholders

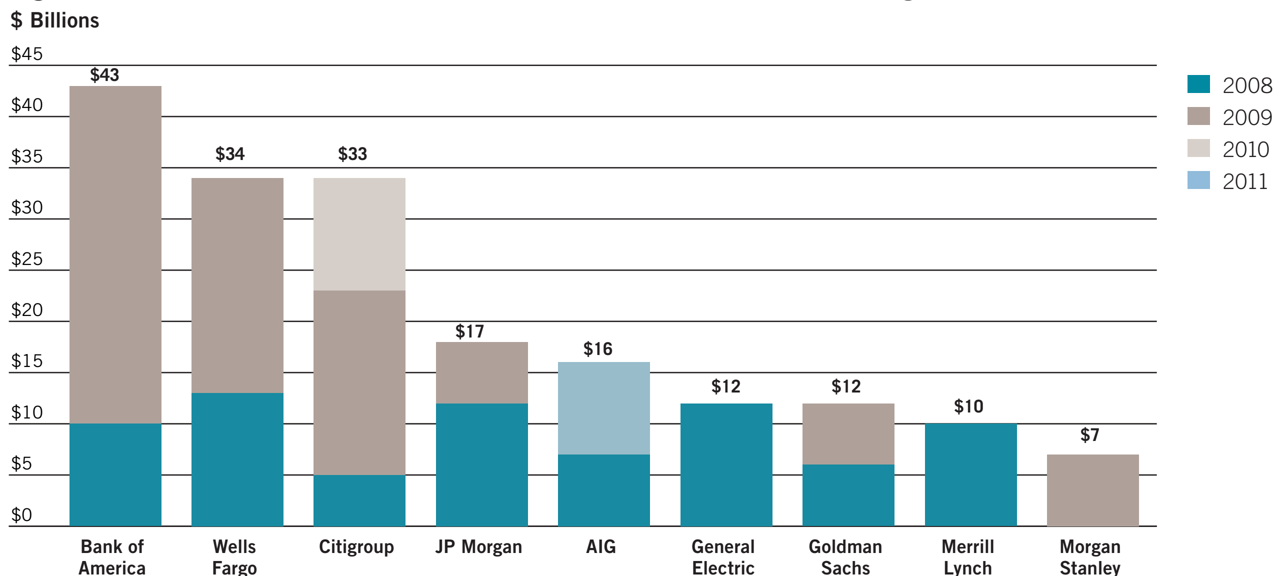
Existing investors can further contribute by committing new capital to the GSEs. This capital commitment could take the form of an investment in a "priming" equity raise, participation in a rights offering, and/or a commitment to backstop a portion of the initial public offering.

4. Public Market Offerings of New Stock

The GSEs could accelerate a rebuilding of capital through a series of public primary common equity offerings totaling $70 to $90 billion, along with approximately $25 billion in new, non-cumulative preferred stock issuance (designed to meet regulatory capital standards). These primary capital raises would begin in 2018 and would be completed by 2020.

While equity offerings of this magnitude are infrequent, they are not without precedent for large financial institutions. From 2008 to 2011, a number of financial institutions were required by regulators to issue equity to bolster their balance sheets and repay funds received under the Troubled Asset Relief Program ("TARP"). For example, Bank of America raised $43 billion, Wells Fargo raised $34 billion, Citigroup raised $33 billion, and JPMorgan raised $17 billion over this period. Collectively, these examples from a tumultuous period of market instability lend credence to the feasibility of large-scale capital raises by Fannie Mae and Freddie Mac.

Figure 2: Selected Cumulative 2008 – 2011 Financial Institution Jumbo Offerings



Source: Bloomberg
Note: Jumbo offering defined as single offerings greater than $5 billion in size

i. See Appendix for further detail, including assumptions related to forward-looking earnings projections, and illustrative valuation and capital raise analysis.

The Role of Soft Capital

Our four building blocks of private capital allow the GSEs to build "hard" capital, in the form of permanent core capital (analogous to Tier 1 capital under bank frameworks) at the corporate level. In addition to these components, two additional "soft" sources of capital exist in the form of risk transfers which decrease risk to taxpayers.

Credit Risk Transfers

Credit Risk Transfers ("CRT") distributes the risk of guarantees on specific mortgage pools to the capital and insurance markets, thus reducing risks held by the GSEs. To the extent that regulators grant risk-based capital relief for CRT and other structures that are demonstrated to provide significant risk transfer, CRT can serve to lower their core capital requirements.

Role and Limitations of CRT

Fannie Mae's and Freddie Mac's CRT programs (and related insurance risk transfer programs CIRT and ACIS) are designed to hedge unexpected losses. Financial institutions, such as banks and insurance companies, use credit protection and excess of loss insurance transactions similar to CRT to enhance or supplement regulatory capital and to absorb the risk of unexpected losses.

While CRT is a powerful hedging tool that can be used to supplement permanent capital, it should not be the only solution. The GSEs need to maintain the ability to determine when CRT is appropriate, and the flexibility to utilize the most efficient forms of risk transfer (e.g., capital markets transactions and excess of loss insurance transfers), based on investor appetite and prevailing market conditions. It is for precisely these reasons that the FHFA stated in its 2016 scorecard that "FHFA will adjust [CRT] targets as necessary to reflect market conditions and economic considerations." Commentators who push for strict CRT issuance requirements, irrespective of market conditions and other forms of capital, ignore the economic realities of the capital markets and the inherent pro-cyclicality that CRT can present.

Unlike firm-level equity capital, CRT references only specific mortgage pools which are not cross-collateralized across all of the GSEs' mortgage guarantee portfolios. The experience of the past credit crisis demonstrated that different vintages can witness dramatically different default experiences.

CRT transactions are also not permanent sources of capital. They have legal maturities and need to be replaced as the specified pools amortize and new mortgages are purchased. This leaves the GSEs exposed to market cyclicality, as future CRT issuance may be unreasonably expensive or altogether unavailable.

While CRT reduces risk-weighted assets, substantial permanent and cross-collateralized equity capital is an absolute necessity to the safe and sound functioning of the GSEs in all market conditions.

Reinsurance Transactions

Reinsurance is a proven source of risk transfer in the insurance industry where, as in the case of the GSEs core guarantee businesses, liabilities are somewhat predictable over long periods of time given data on the contributing factors (e.g., levels of underlying equity, borrower income, and housing prices). Given that residential mortgage credit risk is relatively uncorrelated to other risks commonly handled by large property-and-casualty insurance companies, reinsurance transactions may be a promising new source of incremental protection for the GSEs. In this manner, Treasury could reinsure in whole or in part its ongoing catastrophic guarantee to these private insurance market participants. Indeed, there is ample global reinsurance capacity to replace a substantial portion, and perhaps a large majority, of Treasury's remaining commitment line. In fact, such a structure was seriously considered for deposit insurance in 1983:

> **"[P]articipation by private insurers in deposit insurance appears to be both feasible and desirable. A private role in deposit insurance should reduce both the regulatory and financial burden on government institutions, and market-oriented pricing and management of at least some layers of deposit insurance should have salutary effects on the financial intermediaries. Moreover, the broad range of insurance products that have evolved to cover large catastrophic events, as well as risks of various financial enterprises, demonstrates that private insurers possess the versatility and capacity necessary to participate in depositary insurance."[12]**

Criteria to Determine the Appropriate Mix of Capital

Financial institutions choose what forms of "hard capital" and "soft capital" they use based on market conditions, regulatory requirements, and key financial criteria. Key criteria to be considered by the GSEs and their safety and soundness regulator should include (i) cost of capital, (ii) duration, stability, and countercyclicality, (iii) refinance-ability, (iv) depth of sources and diversification, and (v) depth of risk transfer when considering soft capital such as CRT.

There are fundamentally sound reasons why every capital plan for a financial institution includes both retained earnings and issuance of permanent equity capital. Retained earnings do not require external sources to contribute capital in exchange for a promise of future returns and permanent equity capital is not subject to refinancing risk when the companies in question, or financial markets as a whole, are distressed. These sources of capital can be, and must be, included in any plan.

By recognizing all available sources of capital, safety and soundness can be achieved by 2020 without changes to the prevailing mortgage market infrastructure. The ultimate goal is to ensure that Fannie Mae and Freddie Mac are dramatically de-risked and de-levered by the time the conservatorship concludes. After building capital, the then-outstanding common shares of the GSEs can be transformed into modest dividend-yielding stocks that can attract a deep private investor base in the public capital markets, especially in this era of low interest rates and dividend yields.

Recent Precedents: AIG and Ally Financial

AIG provides an excellent template of a large scale secondary share sale and government exit of a reluctant crisis-era investment. Treasury exercised its warrants receiving 79.9% of AIG's common stock and converted its outstanding balance of preferred shares into additional common equity, before embarking on a series of well-timed and well-placed secondary share sales into the market. Treasury sold $51.6 billion of AIG common stock in secondary offerings in only two years, between January 2011 and December 2012. The conversion of

the government's AIG warrants and sale of AIG common stock was viewed by many market observers as an overwhelming success. By creating a dividend-yielding stock that would be attractive to conservative investors, the same can be achieved with Fannie Mae and Freddie Mac.

American International Group Inc. ("AIG") is a U.S. domiciled multinational insurance corporation formed in 1919 that nearly failed during the crisis, primarily due to losses arising out its Financial Products unit ("AIGFP"). As of September 2008, AIGFP had written approximately $440 billion in credit default swaps and created large, concentrated amount of systemic risk within the market. The federal government promptly intervened in order to protect AIGFP's counterparties, which included some of the world's largest financial institutions, and to stabilize the broader markets. In aggregate, the U.S. taxpayers' overall support for AIG totaled approximately $182 billion. That figure includes nearly $70 billion that Treasury committed through TARP and $112 billion committed by the Federal Reserve Bank of New York ("FRBNY").

On December 8, 2010, AIG announced that it had entered into a master transaction agreement with the Treasury and FRBNY to recapitalize AIG in a series of transactions in order to facilitate the government's exit from ownership in the company. By this point, AIG had undergone a significant restructuring effort to de-risk the business and enable the company to fully repay taxpayers.

Between May 2011 and December 2012, AIG and Treasury conducted six public offerings of AIG common stock, selling a total of 1,655,037,962 shares (originally 92 percent of AIG's outstanding common stock, representing Treasury's full ownership stake after exercising its warrants and equitization of preferred shares) at an average price of $31.18 per share. Treasury's $20.7 billion AIG common stock offering in September 2012, at that time, represented the largest single U.S. common stock offering in history. By March 2013, AIG had returned $205 billion to the U.S. Government, $22.7 billion in excess of the $182 billion provided by FRBNY and Treasury (a $17.7 billion positive return on the $112.5 billion provided by FRBNY, and a $5 billion positive return on the $69.8 billion provided by Treasury).

Source: U.S. Treasury, NAIC.org, Wall Street Journal, SNL, AIG public disclosure

Ally Financial serves as another instructive precedent as it demonstrated the viability of a private sector capital raise via a primary offering (which was dilutive to the then outstanding Treasury ownership), followed by secondary offerings – proceeds of which were used to repay the funds advanced by the Treasury during the financial crisis.

Ally Financial (formerly known as General Motors Acceptance Corporation, or "GMAC") was formed by General Motors in 1919, to act as a provider of financing to automotive customers. In 1985, GMAC expanded into the mortgage business. Twenty years later, in 2005, the company formed Residential Capital ("ResCap") as a holding company for its mortgage originations. Mounting mortgage losses at ResCap during the financial crisis of 2007-2008 led the Treasury to invest approximately $16 billion in GMAC, effectively taking control of the company.

The Treasury took a series of steps to recapitalize the company. In 2009, GMAC announced plans to wind down its legacy mortgage risk and explore strategic alternatives for ResCap. GMAC issued mandatory convertible preferred membership interests ("MCP") in May 2009, and trust preferred securities ("TruPS") in December 2009 under TARP. Treasury converted its MCP interests into GMAC common stock. By the first quarter of 2010 the company had returned to profitability and GMAC was rebranded to Ally Financial ("Ally").

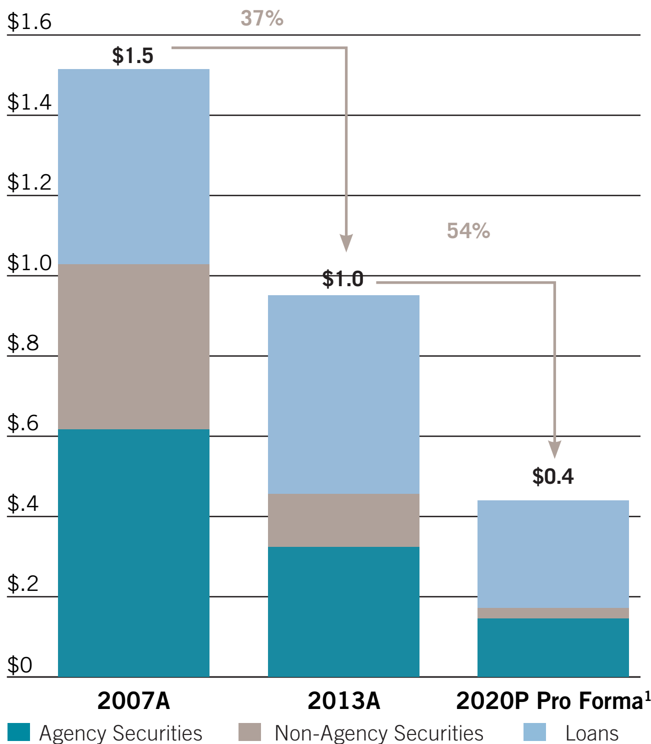
In November 2013, as a precursor to its IPO, Ally paid Treasury a total of approximately $5.9 billion for the repurchase of preferred stock simultaneous with a private placement of approximately $1.3 billion of common stock, diluting Treasury's common stock ownership stake from 73.8% to 63.5%. In order to attract new private capital, as part of the November 2013 transaction Treasury eliminated the anti-dilution ratchet on its warrants. In January 2014, Treasury sold approximately $3.0 billion of shares in Ally through a private placement transaction, reducing its ownership stake to 37.0%. In April of 2014, Treasury launched the IPO of Ally by selling $2.4 billion of its shares, further reducing its stake in Ally to 15.6%. Over the balance of 2014, Treasury sold off its remaining Ally Financial stake in a series of secondary market transactions. Ally ultimately returned $19.6 billion to the U.S. Government, $2.4 billion more than the original $17.2 billion invested.

Source: Bloomberg, U.S. Treasury, Ally Financial public disclosure

Recognize and Continue Reform

The GSEs have been materially de-risked since the crisis. The required reduction of their investment portfolios, from over $1.5 trillion pre-crisis to $0.4 trillion by year-end 2018, is critical to ensuring that the past cannot repeat itself.[13] The GSEs large pre-crisis investment portfolios, which included subprime securities and other higher-risk mortgage assets, were largely responsible for the losses that Fannie Mae and Freddie Mac incurred during the crisis. Our Blueprint continues this wind down of the GSEs' investment portfolios below the mandated thresholds.

Figure 3: Fannie Mae and Freddie Mac: Consolidated Retained Mortgage Portfolio
$ Trillions



Source: Company filings, Moelis estimates

1. 2020 pro forma retained mortgage portfolio allocation based on year-end 2016 pro rata

HERA and Market Reforms Lessen Risk

Key regulatory ***"game changers"*** that have been implemented since 2008 include:

- Improved mortgage quality through implementation of the Qualified Mortgage rule and new servicing oversight standards;
- Enhanced state regulations that serve as controls on mortgage loan origination fraud;
- Strengthened consumer protection rules that reduce the prevalence of complex or exotic mortgage products;
- Increased oversight, with HERA superseding the largely ineffective Federal Housing Enterprises Financial Safety and Soundness Act of 1992;
- Enhanced regulation, as FHFA has been endowed with substantial regulatory powers that its predecessor agency, OFHEO, lacked; and
- Elimination of regulatory capture, by limiting GSE foundations, political contributions, and other sources of undue political influence that in the past led to ineffective regulation.

This strong marriage of reforms, regulation, and sound capital standards will help ensure housing affordability for middle- and working-class Americans while enabling the GSEs to generate a steady and reasonable dividend stream that is sufficiently attractive to private investors.

The Nuts and Bolts

How to effectively implement the Safety and Soundness Blueprint during this presidential term

Enhanced capital standards for post-crisis regulatory era

Taxpayer resources do not constitute capital. To the contrary, taxpayers need to be protected by substantial, subordinated private capital.

Any credible capital regime should subject the GSEs to significantly enhanced capital standards broadly consistent with the capital requirements of other regulated financial institutions. We assume that such a capital regime would include the imposition of both risk-based capital calculations and overall leverage limits. These capital requirements would be further augmented by stress testing at extreme loss cases (e.g., Dodd-Frank Annual Stress Tests which the Enterprises are currently subject to). The implementation of such a regime, which will substantially de-lever the GSEs, is critical to ensuring that any exit from conservatorship includes robust standards and protections for taxpayers to effectively eliminate the prospect of future bailouts.

Pre-crisis, the GSEs were subject to minimum (core) capital requirements of 0.45% on their mortgage guarantee portfolio, plus 2.5% on their on-balance sheet loans and securities. While these requirements have been suspended in conservatorship, they continue to be calculated by FHFA and currently equal approximately $43 billion of core capital under the pre-crisis regime. This amount of capital is woefully inadequate, representing less than 1.0% of the total asset values and guarantee notional amounts at the Enterprises.[ii] At present, under the constraints of the Net Worth Sweep, the GSEs' capital falls far short of even this low minimum.

Setting new standards

Our Safety and Soundness Blueprint targets $155 to $180 billion in permanent capital at the GSEs, equivalent to over 8.5% of risk-weighted assets or 3.0% to 3.5% of total balance sheet assets (including unfunded guarantees). This equates to approximately four times the pre-crisis GSE capital requirements and is equivalent to approximately 150% of the existing capital requirements the Federal Housing Administration ("FHA") is subject to, despite the substantially higher quality portfolios guaranteed by Fannie Mae and Freddie Mac. Furthermore, this permanent GSE capital would be augmented by a reduction in risk-weighted assets provided through the issuance of CRT securities (projected to reach nearly $100 billion, or approximately 2.0% of total assets, at 2020 year-end). Including the use of CRT and loan loss reserves, the Enterprises would achieve total private claims paying resources in the range of $280 to $305 billion (or 5.5% to 6.0% of total assets).[iii]

ii. Source: Company filings

iii. Based on projected 2020 consolidated total assets of $5.1 trillion

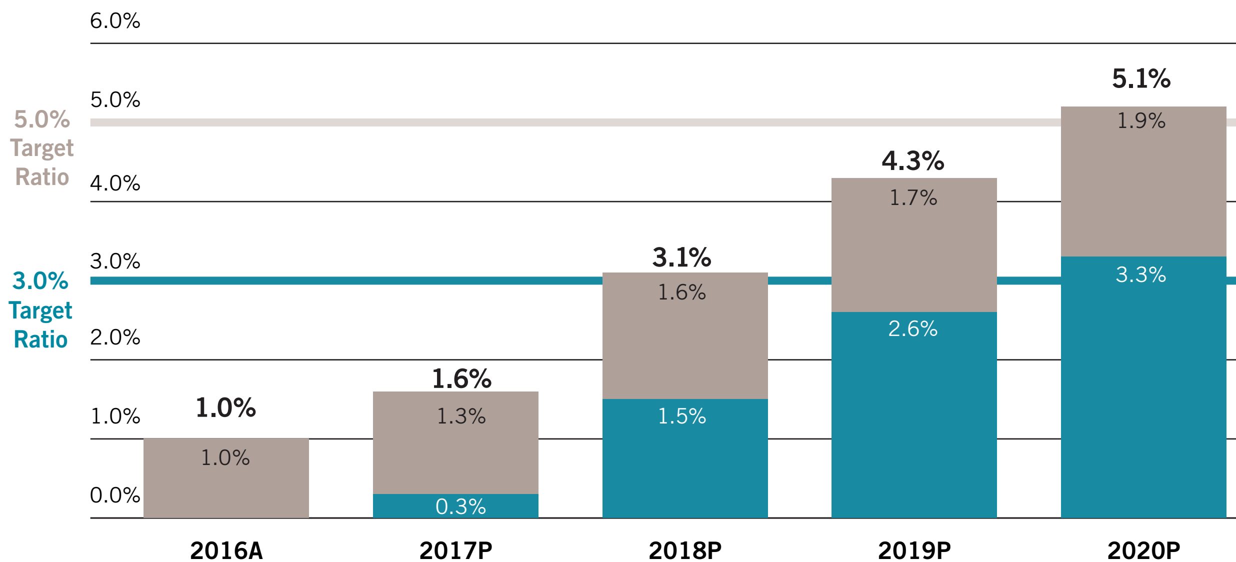
Leverage Ratio

The dual objectives of (a) ensuring sufficient permanent capital and (b) continuing to incent the distribution of guarantee risk to private counterparties and the capital markets can be achieved through the establishment of a two-tiered simple leverage ratio, as illustrated below.

Table 1: Leverage Ratio Requirements

	CAPITAL	MINIMUM THRESHOLD
Primary Leverage Ratio	Core Capital	**3.0%** of Total Assets
Secondary Leverage Ratio	Core Capital plus Outstanding CRT	**5.0%** of Total Assets

Figure 4: Projected Consolidated Leverage Ratio
$ Billions at December 31



	2016A	2017P	2018P	2019P	2020P
Core Capital[1]	($188)	$12	$75	$131	$167
CRT Capital[2]	54	67	78	88	97

Source: Company filings, Moelis estimates
1. Core Capital includes Common Equity and Junior Preferred Stock
2. CRT Capital includes CRT debt issued and outstanding to third parties

Risk-Based Capital Requirements

In addition to leverage ratio requirements, our Blueprint assumes the imposition of a risk-based capital requirement, provisionally set at 8.5% of risk-weighted assets which is consistent with international banking standards.[14] This equates to 4.25% of mortgage guarantee notional (which would be subject to a 50% Standardized risk-weight under the U.S. Basel III framework[15]) and slightly exceeds the requirements proposed by the International Association of Insurance Supervisors (IAIS), which requires 4.0% capital for mortgage insurance (as a percentage of risk-in-force).[16] ***These illustrative risk-based capital requirements would require Fannie Mae and Freddie Mac to hold capital against their core guarantee business equivalent to nearly ten times their pre-crisis requirements and more than double the FHA's current requirements.***

Table 2: Risk-Based Capital Requirements

RISK-BASED CAPITAL REQUIREMENTS	
Mortgage Guarantee Risk Weights	50%
(x) Minimum Risk-Based Capital Requirements	8.5%
Risk-Based Capital Requirement	**4.25%**
Pre-Crisis GSE requirement	0.45%
FHA Capital requirement	2.00%

Dedicated mortgage insurers

In assessing capital requirements, we should recognize the unique nature of Fannie and Freddie as single-purpose mortgage guarantors. Nearly 90% of Fannie's and Freddie's assets are effectively match-funded through issuance of MBS by consolidated trusts. As such, the GSEs are not dependent on deposit funding that can be withdrawn and are far less dependent on short-term funding (such as commercial paper) when compared to other financial institutions. In other words, unlike banks, the GSEs have limited liquidity and interest rate risk, instead operating under a proven insurance company model which precludes the possibility of financial "runs."

Given the unique nature of Fannie Mae and Freddie Mac's businesses, and particularly the scale of their mortgage guarantee businesses, FHFA may elect to implement a more nuanced risk-weighting system for mortgages, as compared to the fairly simplistic (e.g., 50% RWA) approach applied to multi-product banks. Such an approach would be consistent with FHFA's more granular Private Mortgage Insurer Eligibility Requirements (PMIERs).[17] Doing so could also enable FHFA to encourage product innovation by recognizing the true economic impact of offsetting factors in determining the quality of a mortgage, as well as the risks associated with risk-layering (e.g. combinations of lower FICOs with higher LTVs or DTIs). A more nuanced approach to determining RWAs could also help to broaden the "credit box" that has historically excluded large groups of deserving Americans from obtaining a mortgage. Multi-product banks may themselves migrate towards such an approach, as proposed Basel IV rules now contemplate more granular mortgage risk-weights (including differentiation based on LTVs).

Role of FHFA in setting minimum capital standards

The FHFA, which HERA endowed with broad discretion and authority to implement capital standards for the GSEs, will have the ultimate responsibility for designing and implementing final capital requirements.[18] This authority, which has not been used or tested since the crisis, allows FHFA to impose a safe and sound regulatory regime tailored to the unique nature of the GSEs' businesses and, designed to prevent the undercapitalization which led to their initial conservatorship. FHFA should be strongly encouraged to exercise this authority.

While we have sought to provide credible assumptions in designing and testing this Blueprint, the architecture of the Safety and Soundness Blueprint can be applied to lower or higher minimum capital requirements.[iv]

Continued De-risking of the Guarantee Portfolios

Consistent with the leverage ratio, risk-based capital standards should incent continued risk mitigation efforts by the GSEs. The regulator should grant risk-based capital relief for CRT and for other approved structures that are demonstrated to provide significant risk transfer. This relief can be provided through a reduction in the risk weighted asset calculation for hedged mortgage portfolios.

For illustrative purposes, we have applied a reduced risk-weight of 20% (taken from the Simplified Supervisory Formula Approach, or "SSFA") to the portion of the GSEs' mortgage portfolios that are subject to credit risk transfer.[19] Application of this approach to historical CRT issuances results in just over $0.50 of risk-based capital relief for every $1 of CRT issuance at the time of the issuance of the CRT securities.[v]

The chart and table below detail calculations of such risk-based capital requirements applied to the current GSE portfolios and to an estimate of the portfolio over time, pro-forma for continued credit risk transfer. This illustrates an average risk-weighting of the GSEs' portfolios declining from 42.5% at 2016 year end to 36.3% at 2020 year end, with minimum risk-based capital declining in parallel, from 3.6% to 3.1%.

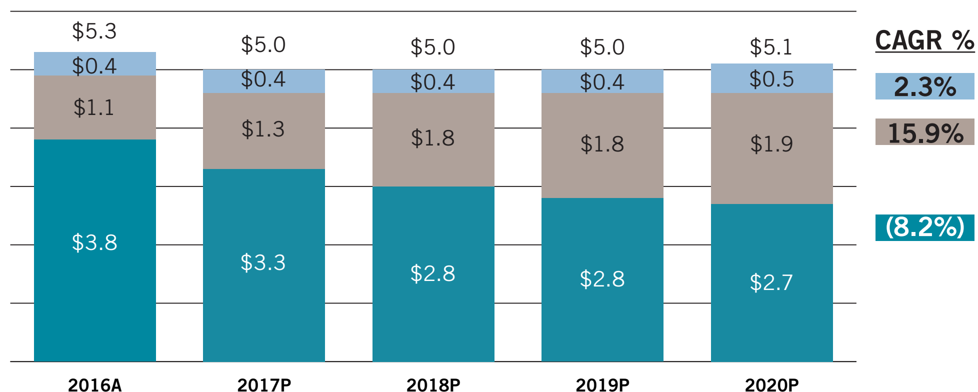
Table 3: Implied Risk-Based Capital Requirements

RISK-BASED CAPITAL REQUIREMENTS		
Mortgage Guarantee Risk Weights	50%	
Hedged Mortgage Guarantee Risk Weights	20%	
	2016	**2020**
Blended Risk Weighting	42.5%	36.3%
(x) Minimum Risk-Based Capital Requirement	8.5%	8.5%
Implied Risk-Based Capital Requirement	**3.6%**	**3.1%**

iv. There is an implicit trade-off between safety and soundness, on one hand, and the cost of guarantee fees and timeline to building capital, on the other. Imposition of more conservative capital requirements (e.g., 4% to 5% capital minimums) would require higher guarantee fees, in order to provide a sufficient market return to the larger amount of private capital that needs to be raised from third parties, and/or would necessitate a slower capital build. FHFA as safety and soundness regulator has the ultimate responsibility for assessing and evaluating this trade-off.

v. In simple terms, this is because issuance of approximately $4 to $5 of CRT securities per $100 of portfolio notional (e.g., the 0% to 5% or 1% to 5% tranches of a STACR or CAS deal), is assumed in our analysis, to reduce GSE capital requirements on the hedged portfolio from $4.25 (8.5% RBC x 50% RWA), to just under $2 (8.5% x approximately 20% RWA). This results in approximately $2.5 reduction in core capital requirements per $4 to $5 of CRT security issuance. Note further that, in the tables that follow, mortgage loans subject to CRT are risk-weighted at 19% (reflecting full risk transfer – and thus 0% risk-weighting – with respect to the issued tranches, and 20% risk-weighting on the retained senior tranches). Even this calculation reflects a simplifying assumption, that the GSEs fully distribute the junior CRT tranches.

Figure 5: Projected Evolution of Consolidated GSE Balance Sheets and Risk-Based Capital Requirements
$ Trillions at December 31,



	2016A	2017P	2018P	2019P	2020P
RISK WEIGHTS					
CRT Mortgage Loans	19.0%	19.0%	19.0%	19.0%	19.0%
Other Mortgage Loans[1]	49.6%	49.5%	49.4%	49.4%	49.3%
Other Assets[2]	38.0%	36.8%	35.7%	33.8%	32.5%
Total	42.5%	40.4%	38.8%	37.4%	36.3%

	2016A	2017P	2018P	2019P	2020P
RISK-WEIGHTED ASSETS					
CRT Mortgage Loans	$0.2	$0.3	$0.3	$0.3	$0.4
Other Mortgage Loans[1]	1.9	1.6	1.5	1.4	1.3
Other Assets[2]	0.2	0.1	0.1	0.2	0.2
Total	$2.3	$2.0	$1.9	$1.9	$1.9

	2016A	2017P	2018P	2019P	2020P
IMPLIED REQUIRED CAPITAL					
Risk-weighted assets	$2.3	$2.0	$1.9	$1.9	$1.9
(x) Required RBC ratio	8.5%	8.5%	8.5%	8.5%	8.5%
Implied Core Capital required	$0.2	$0.2	$0.2	$0.2	$0.2
% of assets	3.6%	3.4%	3.3%	3.2%	3.1%

Source: Company filings, Moelis estimates

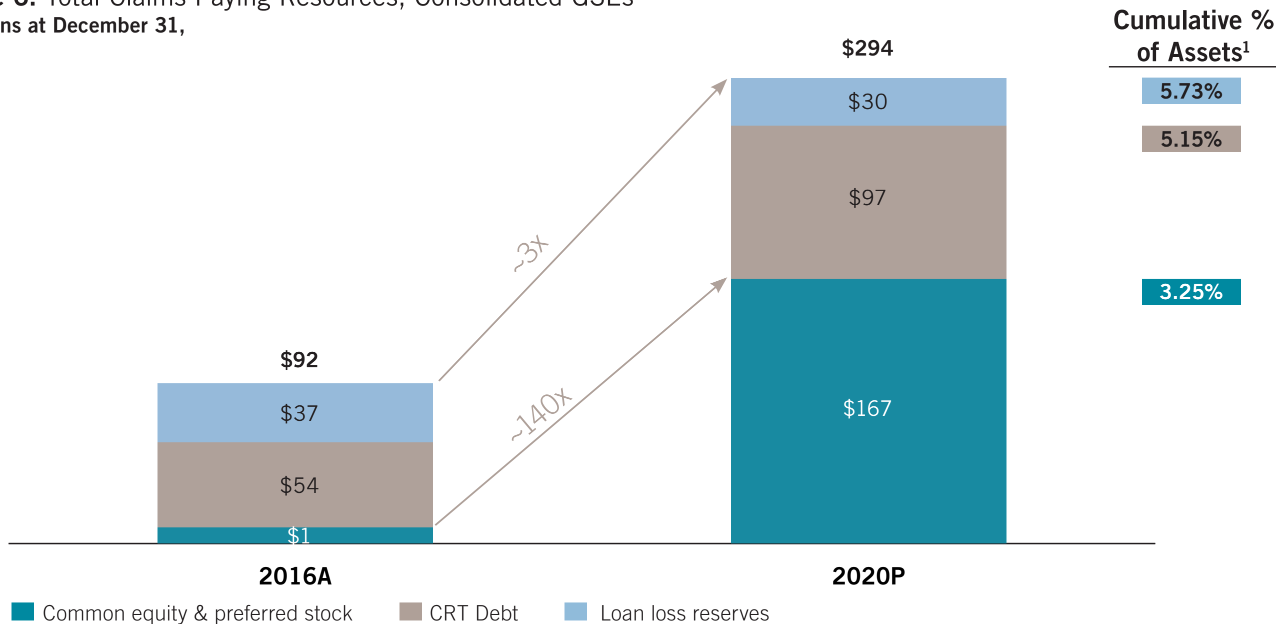
1. Includes unhedged mortgage loans held for investment, loans held for sale, allowance for loan losses, and cost basis and fair value adjustments. Gross mortgage loans are risk-weighted at 50%. Risk-weights are not applicable for allowance for loan losses, or cost basis and fair value adjustments
2. Includes cash, fed funds purchased and securities purchased under repurchase agreements, investment securities, accrued interest, derivatives, other real estate owned, deferred tax assets, and other assets. Risk-weights applied on asset specific basis in accordance with U.S. Basel III standardized risk-weighting (including notional derivative adjustments)

While our analysis assumes risk-weighted asset relief being granted in relation to qualifying credit risk transfer transactions, the net effect of this relief is not to reduce the quantum of total private capital from the baseline risk-based calculation of 4.25% (i.e., 8.5% minimum capital ratio multiplied by a 50% risk-weighting). Instead, total private capital increases under our Blueprint and ultimately exceeds a minimum target of 5.0%. The chart below illustrates total claims paying resources (defined here as core capital, plus outstanding CRT issuances, and loan loss reserves) ahead of any taxpayer funds.

Table 4: Total Claims Paying Resources

TOTAL CLAIMS PAYING RESOURCES PRO FORMA 2020 YEAR END		
	% of Assets	**$ Billions**
Core Capital (Common + Junior Preferred)	3.0% - 3.5%	$155B - $180B
CRT Outstanding Issuance	2.0%	$100B
Loan Loss Reserves	**0.5%**	**$25B**
2020 Total Claims Paying Resources	**5.5% - 6.0%**	**$280B - $305B**

Figure 6: Total Claims Paying Resources, Consolidated GSEs
$ Billions at December 31,



Source: Company filings, Moelis estimates

1. Based on projected 2020 consolidated total assets of $5.1 trillion

Capital Raise Mechanics

Our Blueprint raises $155 to $180 billion in core capital within four years. This capital is raised through a combination of (i) retained earnings, (ii) conversion of a substantial portion of outstanding junior preferred shares to common, (iii) rights offerings (or participation in a "priming" equity raise) to raise additional capital from shareholders, and (iv) issuance of new common and junior preferred shares to institutional investors.[vi] This permanent capital is also augmented by the continued (albeit market dependent and when prudent) use of CRT.

The Blueprint utilizes broad public offerings, both with respect to primary offerings and secondary offerings of Treasury's shares. The capital-raising process would be open to all interested capital providers, subject to customary government policy concerns (e.g., prudential regulation of investing parties, diffusion of systemic risk, etc.). This structure is designed to maximize value to Treasury as a shareholder by relying on a deep, liquid, and market-based mechanism to determine the recovery amounts to existing GSE shareholders. The diagram and table below illustrate the process of rebuilding capital from 2017 through 2020 year-end.

Figure 7: Rebuilding a Fortress Balance Sheet

$ Billions

		REBUILDING CORE CAPITAL	% ASSETS[1]
Adj. 2016A Core Capital	SPS principal reduced to reflect original contractual terms, with any remainder exchanged into equity	$1B	+0.0%
Retained Earnings[2]	Dividends suspended until capital build is completed	$62B	+1.2%
Common Equity Raised	2018 relisting, 2019 offering(s)	*Initial* $40B; *Follow-on* $40B	+1.6%
Preferred Stock Issuances	2020 issuances augment existing junior preferred stock (to the extent not converted)	$25B	+0.5%
2020P Core Capital	Dividends resume	$167B	3.25%

Source: Company filings, Moelis estimates

1. Based on 2020 projected total assets of $5.1 trillion
2. Retained earnings net of common and preferred dividends

vi. Further details, including company earnings projections and assumptions can be found in the Appendix.

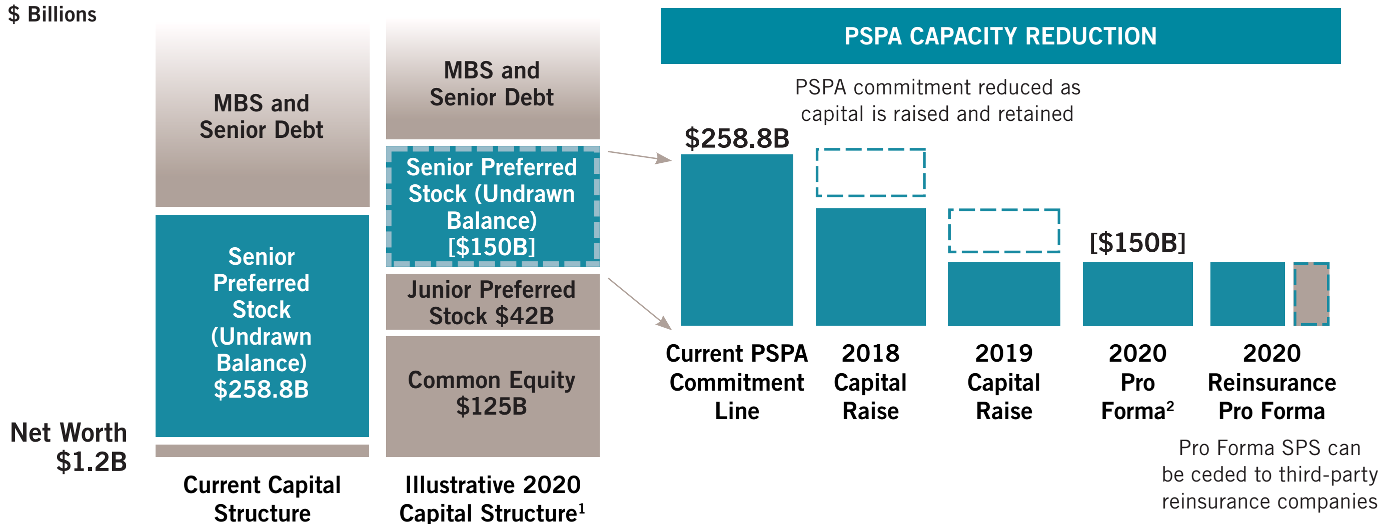
Reduced Reliance on Government Backstop Commitment

While a catastrophic government guarantee is likely needed to support the smooth operation of the secondary mortgage and TBA markets, and to maintain the broad availability of the 30-year fixed-rate conventional mortgage, there should not be a realistic scenario in which that backstop would again be drawn upon. ***Importantly, if the GSEs had the capital levels and were subject to the regulatory constraints articulated in this Blueprint during the 2008 financial crisis, neither company would likely have had any need for federal financial assistance.*** Under this Blueprint, the existing backstop facility provided by the Treasury (i.e., the Senior Preferred Stock Purchase Agreement) would be maintained but transformed into an explicit, limited, second-loss catastrophic guarantee that would be called upon only when robust private capital reserves are fully exhausted. The government would be appropriately compensated for this catastrophic backstop via a market-based commitment fee, which has been estimated at 50 basis points for the purpose of this Blueprint.

The current undrawn commitment line is $258.8 billion. After balancing prudential capital standards and ongoing market support, the size of this commitment line could potentially be reduced with further stock issuances, retained earnings, and CRT issuance. This limited, but explicit and paid-for, support by the Treasury would preserve the deep and liquid global market for agency securities, and allow these securities to continue benefiting from favorable capital and liquidity treatment.[vii]

The diagram below illustrates the current capital structure (with only $1.2 billion in Net Worth cushion against further draws on the commitment line), and a projected 2020 capital structure (with over $165 billion in Core Capital protecting the taxpayer). The Blueprint envisions reducing the size of this commitment as capital is built by the GSEs, with the PSPA line winding down to a notional floor of $150 billion.[viii] Moreover, third-party reinsurance transactions of the commitment line could further reduce the amount of taxpayer risk to well below $150 billion.

Figure 8: Preferred Stock Purchase Commitment: Illustrative Wind down



Source: Company filings, Moelis estimates

1. Illustrative capital structure reflects $167 billion of core capital (i.e., common equity plus junior preferred stock) consistent with our mid-point target capital level (3.25%), as used elsewhere in this whitepaper. Assumes pro forma preferred stock balance of $42 billion based on $25 billion of new issuance plus, for illustrative purposes only, $17 billion of outstanding legacy junior preferred stock (pro forma for an illustrative 50% equitization)
2. Undrawn PSPA capacity is expected to range from $80 to $150 billion based upon the requirements of (i) the safety and soundness regulator and (ii) a minimum balance necessary to support TBA markets and maintain current Basel III treatment of GSE MBS and agency debt

vii. A number of market participants, commentators, and legislators have discussed the possibility of transforming the existing PSPA support into a full guarantee of GSE MBS (paid for, and supported by sufficient private capital – consistent with those aspects of our plan). While we believe market stability can be maintained utilizing the existing PSPA, and in fact winding-down that PSPA line over time, nothing in our plan would preclude new legislation to restructure this support into a full MBS guarantee, should Congress ultimately enact any such legislation.

viii. The notional floor for undrawn PSPA capacity should be set based upon the requirements of the safety and soundness regulator, and should be sufficient to support TBA markets, and to maintain current Basel III treatment of GSE MBS and agency debt. The estimate used herein ($150 billion) is illustrative in nature, and substantially exceeds the notional amount required to maintain the current level of claims paying resources at the GSEs (approximately $93 billion, based on our base case capital scenario).

Stakeholder Benefits

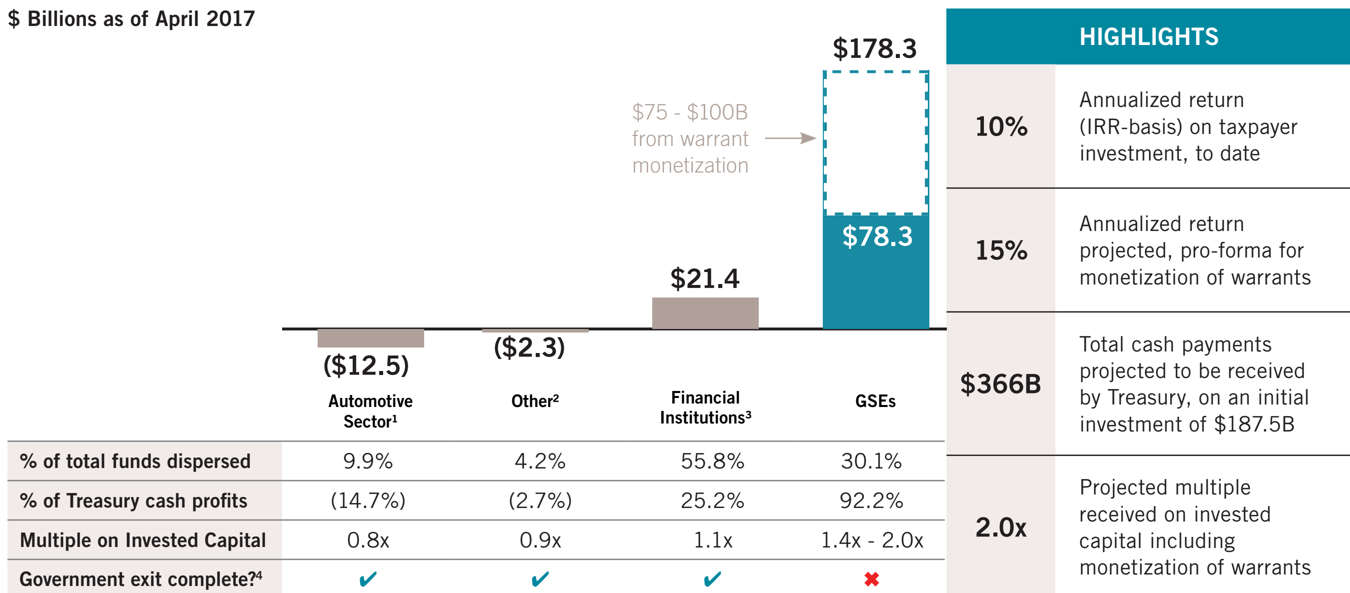
Our Blueprint provides a pragmatic and workable solution, so that all of the parties involved in litigation relating to the Net Worth Sweep will find it beneficial to agree to the terms of the proposed transactions – as would be the case in a normal restructuring process. The Blueprint emphasizes respect for the existing capital structure and restores normal corporate governance in the context of highly regulated public mortgage guarantors.

We envision existing shareholders to provide a substantial contribution to assist the Enterprises in meeting their capital requirements. This contribution can take the form of a conversion of (i) existing junior preferred stock into common equity, (ii) investment in a private placement "priming" equity raise, and/or (iii) participation in the initial public primary equity issuance through a rights offering or a committed backstop facility. The goal would be to ensure a successful capital build by respecting the capital structure and providing a Blueprint that benefits all stakeholders.[ix]

The biggest "winner" by far is the American taxpayer, who owns warrants through the Treasury that could be worth an incremental $75 to $100 billion in cash profits upon being exercised and ultimately sold. These proceeds are expected to create a windfall under the CBO budget, providing additional capacity for administrative priorities (e.g., tax reform, infrastructure). Under the OMB's budget, our Blueprint should bring forward this substantial revenue into this presidential term, which would be beneficial for debt-ceiling and other shorter-term budgeting requirements.

Taxpayers have received nearly $80 billion in profits to date, equivalent to an annualized return of over 10%. This is consistent with the original contractual terms, prior to the imposition of the Net Worth Sweep.[20] Under this Blueprint, up to $100 billion in incremental profits are generated by monetizing Treasury's warrants. This could bring the total dollar amount recouped by Treasury up to $366 billion, nearly doubling the $187.5 billion of taxpayer funds invested. This would equate to a 15% internal rate of return on the taxpayers' investment, which equals or exceeds the returns that investors typically earn for providing capital to distressed companies. These returns will far surpass other crisis-era investments made by the Treasury.

Figure 9: Treasury's Cash Profits from Federal Financial Assistance Programs
$ Billions as of April 2017



	Automotive Sector[1]	Other[2]	Financial Institutions[3]	GSEs
% of total funds dispersed	9.9%	4.2%	55.8%	30.1%
% of Treasury cash profits	(14.7%)	(2.7%)	25.2%	92.2%
Multiple on Invested Capital	0.8x	0.9x	1.1x	1.4x - 2.0x
Government exit complete?[4]	✔	✔	✔	✖

Source: Pro Publica, Company filings, Moelis estimates

1. General Motors Company and Chrysler Group LLC
2. Includes investment funds, state housing organizations, TALF, SBA security purchases and the FHA refinance program fund
3. Includes banks, financial services organizations, insurance companies, and mortgage servicers
4. Excludes the approximately $290 million of remaining TARP investments held by Treasury as of April 2017

ix. Retirement of the Senior Preferred Stock (treating all amounts paid in excess of the initial 10% cash dividend rate as repayment of principal) should also have the benefit of allowing for a full and final settlement of shareholder litigation. While Moelis does not represent litigants, the interests of our clients are aligned with those of the litigants, taxpayers, and all other Fannie Mae and Freddie Mac shareholders. Furthermore, the practical ability to raise private capital and to monetize Treasury's warrants is contingent on elimination of this senior preferred share overhang and a level playing field.

Structural Alternatives

We have analyzed a wide array of structural alternatives to effectively implement this Blueprint, which legal advisors to our clients have affirmed are workable for these purposes and consistent with the authorities and limitations of current law.[x] Under any structure analyzed, our objectives are to:

- Maximize the value of the government's ownership stake on behalf of taxpayers;
- Respect the role that well capitalized GSEs must play in a vibrant U.S. housing market;
- Recognize the need for strong and comprehensive prudential regulation;
- Provide the government with the ability to reduce its backstop commitments over time;
- Preserve the interests of stakeholders;
- Rely on private capital as a determining factor with respect to valuations;
- Provide transparency and disclosure to the markets, to minimize structural changes and avoid disruption; and
- Refocus the GSEs on their limited core mission of providing liquidity to the mortgage market, and maintain the bright line between the primary and secondary mortgage market.

We look forward to engaging with the government on available transaction structures.

x. These structures range from a simple reversal and termination of the conservatorships, to more complex multi-step transactions that effectuate the transfer of legacy assets and liabilities to successor entities of the GSEs, in a series of pre-packaged transactions.

Blueprint Benefits

Overview

The Safety and Soundness Blueprint combines the best elements of existing industry proposals with the most feasible and executable transaction structure and is supported by detailed financial analysis and projections. Together, these features go further than any existing proposal in protecting the taxpayer, maximizing value to the government, and charting a feasible and credible path to a near-term resolution for the GSEs. A summary of the benefits that this proposal provides is presented below.

Protects taxpayers with permanent capital

This Blueprint is appropriately counter-cyclical through its use of permanent equity capital. Other plans transfer mortgage risk to the capital markets during good times but expose taxpayers to potential losses in the event of an economic downturn when market risk capacity may not be available. Permanent capital is critical to ensuring that taxpayers will not be exposed to the risk of future bailouts. While we encourage the GSEs to transfer credit risk through CRT as market conditions permit (and at prices competitive with other capital sources), we would not endorse mandating or otherwise forcing Fannie Mae and Freddie Mac to enter into transactions that are uneconomic or impractical. ***This Blueprint has real funded equity capital that supports the mortgage market through a cycle. It does not rely on programmatic issuances that, as history has shown, cannot be relied upon during recessions.***

Ensures mortgage market stability

This Blueprint utilizes the proven infrastructure that has successfully helped middle-class and working-class Americans buy homes for decades. These systems were not the cause of the financial crisis and do not need to be redesigned or rebuilt. In fact, the GSEs infrastructure allowed the conforming MBS market to continue to function and meet its objectives through the depths of the financial crisis. This Blueprint provides continued support to the current mortgage financing markets (including the TBA and GSE MBS markets, both of which are critical to the continued availability of the 30-year fixed-rate conventional mortgage), and maintains existing affordable housing mandates and policy goals. This Blueprint builds upon all reforms that have been implemented to date. It goes even further by recognizing the consequential role that HERA can play, and that FHFA has played over the last nine years, while balancing prudent regulation with private investor returns, and affordable housing goals and mandates. Other plans create new government corporations, untested and expensive open-access conduits, and unlimited explicit financial support of MBS by taxpayers, requiring a continued role for the government in the mortgage space that is likely to be ***larger and less desirable*** than the one it plays today.

Reduces the government's footprint

This Blueprint gets the government and the U.S. taxpayer off the hook from excessive support of the U.S. housing market and mortgage credit risk. As capital builds at the GSEs, the current backstop line should be partially wound down, rather than converted to an unlimited guarantee. We propose an explicit, but truly limited, catastrophic backstop, in a senior position to robust levels of private capital, supporting highly regulated shareholder-owned companies. Our emphasis on private capital significantly enhances the free-market clearing mechanism for capital in bearing mortgage credit risk, while maintaining Fannie Mae's and Freddie Mac's traditional roles supporting the critically important secondary mortgage markets.

Respects realities of mortgage capital markets

This Blueprint provides comprehensive financial analysis demonstrating how private capital can be put to work to mitigate mortgage market credit risk, reduce the government's footprint in housing, and create "true" market pricing signals and capital allocation. Other plans allude to private capital but they fail to specify how much capital would actually be required, fail to provide details as to how that capital would be raised, and fail to specify where that capital will come from or the associated impacts on financial markets.

Any effective capital building exercise should be consistent with the real-world mechanics of corporate finance, the mortgage origination and securitization system, and public equity and debt markets. Other plans primarily focus on political goals and include little financial substance. Private capital will not return to the market unless the "rules of the road" to govern such capital are well understood and respected, and investors are able to earn a market-dictated rate of return on their investment. The housing market, cannot and should not be put into a grand experiment that, if it fails, could lead to financial distress for all Americans and the broader global economy.

Feasible implementation

As many commentators have recognized, we are long past the time when the conservatorship of Fannie Mae and Freddie Mac should have ended. Proposed plans that require new government guarantees on mortgage-backed securities, new charters, or an expanded government role in the mortgage market create complications which introduce dramatic timing and execution risk to solutions that the American people deserved long ago. Through existing legal authorities the FHFA and Treasury can largely implement the near-term process of reforming the GSEs, while still providing ample room for Congress to enact comprehensive housing reform legislation in the future. This framework is broadly consistent with bank reform efforts, where Treasury was responsible for exiting its TARP investments and Congress was responsible for regulatory reforms (e.g., Dodd-Frank).

Addresses long standing market overhang

Only this Blueprint delivers a timely solution that can be fully implemented without exposing the taxpayer to further unnecessary risk. Many other plans impose long tail risk on the government for legacy asset run-offs while seeking to establish new untested mortgage market structures. Our Blueprint can be achieved within four years, provides substantial value to the government's warrants, uses existing statutory and regulatory authority, and recognizes the unique roles Fannie Mae and Freddie Mac play as secondary mortgage market insurers. This Blueprint mitigates financial risk to the American taxpayer while supporting affordable housing policies, funds, and goals, and creating dividend-paying stocks for conservative investors.

Maintains an even playing field for everyone

This Blueprint ensures that the housing finance system is available to all market players irrespective of size or market sophistication. This is particularly important to smaller institutions that want to service their own loans and maintain primary contact with their local clients. This Blueprint preserves the use of current systems that support equitable access for loan originators of all sizes including small banks, non-bank specialty finance companies, and large money center banks. As noted, other plans create new mortgage frameworks, cannibalize pieces from the existing system without regard to legal rights of ownership over those pieces, or create uneven playing fields that generally favor big banks.

The Common Securitization Platform ("CSP") should remain controlled and owned exclusively by Fannie Mae and Freddie Mac. The continued malaise in the private label MBS market has nothing to do with whether or not large banks that have their own infrastructure have access to the CSP. By eliminating Fannie Mae and Freddie Mac as secondary-market counterweights, these big banks could dominate the U.S. mortgage finance system. Nearly nine years after the financial crisis, big banks continue to pay unprecedented fines for servicing errors, mortgage origination fraud, and improper sales practices. Concentrating control of the $10 trillion U.S. mortgage market in the hands of these big banks would be a grave mistake.

Harvests idle taxpayer assets that can be used for other priorities

This Blueprint is the only plan that recognizes the franchise value of Fannie Mae and Freddie Mac and the corresponding value to the government as an existing shareholder. We project the value of the government's warrants for common stock in these Enterprises to be worth an estimated $75 to $100 billion. Financial institutions are typically valued by the market based on multiples of earnings, premiums to book value, or both. Carving up Fannie Mae's and Freddie Mac's assets into a series of government corporations, reconfiguring the architecture of the mortgage market, and relying on untested (and in certain instances, unworkable) corporate structures has the potential to substantially destroy the value that taxpayers and other shareholders expect to have preserved (and maximized) under current law.

Comparison to Other Plans

Our Blueprint is easier to implement, brings private capital back to the market faster, and seeks to maximize the government's compensation for its crisis-era financial support for the GSEs

Historical proposals have relied on wholesale infrastructure changes

Many market commentators acknowledge the critical need for private capital to return to our nation's secondary mortgage system. However, historical reform proposals have heavily relied upon (i) big government solutions, (ii) development of large and expensive experimental infrastructure, and (iii) procyclical credit risk transfer programs as a panacea. These plans are also dependent upon significant bipartisan congressional agreement which has failed to materialize to date and which may not occur for the foreseeable future. Certain special interest groups argue that the problem is simply too big and would take too long to resolve without overarching and far reaching government support alongside new mortgage market plumbing. Our Blueprint addresses these issues head-on.

Recent industry proposals are moving in the right direction, but are incomplete

Recent proposals from the ICBA and the MBA represent progress in the right direction and our Blueprint shares much in common with them. The ICBA and MBA proposals both recognize the risks associated with establishing new mortgage finance infrastructure, and instead opt prudently to rely on the existing operational infrastructure and processes of the GSEs. Both plans preserve the TBA market, which is crucial to the continued availability of the 30-year fixed-rate conventional mortgage. Further, these plans maintain the core functions of the GSEs (e.g., the duty to serve and affordable housing mission), which are central to middle-class and working-class housing affordability.

These industry proposals address taxpayer protection using a similar approach to the one spelled out in this Blueprint, making guarantors of securitized mortgages hold substantial capital (and raising such capital if those guarantors do not have it) and establishing enhanced capital standards consistent with those of other large financial institutions. They continue existing reforms, winding down the GSEs' investment portfolios, which were a central cause of crisis-era losses, and continuing credit risk transfer programs on economically sensible terms and under appropriate conditions. The MBA plan specifically calls for a three-pronged approach to capital standards (leverage ratio, risk-based capital requirements, and stress testing), and incentivizes continued de-risking of the guarantee portfolios via the granting of regulatory capital relief for approved CRT structures – which provide true, first-loss, risk transfer. Our Blueprint is entirely consistent with this approach.

We agree with the ICBA that capital retention must begin now and can be followed shortly by new capital raises. Under this Blueprint, capital raises begin in 2018 and the GSEs can fully rebuild capital (and facilitate a complete government exit) by 2020.

Finally, the ICBA and MBA proposals address the duopsony (the market condition that exists when there are only two buyers) of the GSEs, providing stability in mortgage rates by transitioning to an approach that regulates the pricing of guarantee fees. While our Blueprint does not prescriptively address the issue of regulating guarantee fees, so long as they are set by markets together with regulators to appropriately strike a balance between ensuring ample safety and soundness while providing adequate returns to attract private capital, on one hand, and providing a stable and fair housing market, on the other hand, we would not disagree.

We also agree with many of BlackRock's principles for GSE reform. BlackRock supports the importance of "a clearly defined government role," and rightly points out that catastrophic government support "is necessary to support a deep and liquid TBA market" (and ultimately to ensure the availability of the 30 year mortgage).[xi] BlackRock emphasizes that any government support should be "appropriately priced," and "explicit," and supports "prudent and reasonable levels of private capital credit risk absorption via capital markets." BlackRock notes that a "cushion" is needed "to protect taxpayers." They also highlight the importance of a smooth transition to any new system, and suggest that plans should require "fungibility of the existing GSE MBS with any new system."[21] Our Blueprint satisfies each of these principles.

Our Blueprint is also consistent with many of the principles recently set out by the American Bankers Association (the "ABA"). Specifically, the ABA has called for "preservation of the To Be Announced (TBA) market," a continuation of credit risk transfers (to the extent they are "real transfers of risk" and are "economically viable"), a "well-defined QM requirement," and assurance that the GSEs "must be appropriately capitalized to the risks borne and regulated to ensure that they remain so in all market conditions."[22] We agree with each of these points, without reservation.

Advantages vis-à-vis Industry Plans

While there is much to agree with in the current industry proposals, we believe that our Blueprint represents the only feasible and credible path forward.

Our Blueprint does not rely on an unlimited and/or implicit guarantee provided by the federal government. Instead, ongoing government support is provided via the existing $258 billion PSPA commitments. As such, our Blueprint explicitly limits taxpayer risk to not exceed this remaining commitment amount. Furthermore, our Blueprint substantially reduces this risk over time in two ways. First, the remaining PSPA commitment partially steps down as capital is built by the GSEs, effectively replacing government risk with private capital. Second, we envision a risk-sharing mechanism whereby the Treasury continues to provide the then-reduced PSPA commitment, but shares that risk with the capital or reinsurance markets through participations or quota share reinsurance. These efforts would reduce Treasury's PSPA exposure from $258 billion to less than $150 billion.

By avoiding the need for a full government guarantee on mortgage-backed securities, the Safety and Soundness Blueprint not only reduces risk to the taxpayer but also avoids the need for new legislation to authorize such a guarantee. Further, this Blueprint does not require new charters to be put in place, a feature of the MBA's plan, or amendments to the existing charters, as contemplated by the ICBA, both of which would require incremental legislation. Our Blueprint is, however, wholly compatible with any legislation that potentially re-charters the GSEs as utilities with an independent board that would set guarantee fees, should Congress agree to enact such a change.

More importantly, our Blueprint does not require a winding down of the existing GSEs, or use of market-destabilizing legal constructs like receivership, as envisioned by the MBA. The MBA proposal contemplates leaving behind substantial portions of the GSEs' portfolios and winding these portfolios down over time (for example, in MBA's operating subsidiary model). This approach fails to protect taxpayers as private capital is only raised at the "new guarantors," leaving the "old GSEs" effectively nationalized, with any and all risk associated with the existing books of business fully borne by taxpayers for decades to come.

xi. While our Blueprint does not envision an unconditional government guarantee on MBS, as BlackRock calls for, we clearly define the role of the government, and utilize the existing PSPA commitment line to ensure stability in the GSE MBS and unsecured debt markets while reducing risk to the taxpayer. This Blueprint attempts to reduce ongoing government support, rather than increase it – via an unlimited securities level guarantee. Limits on investment portfolio size, which serve to focus the GSEs on their core guarantee business, can be augmented by restrictions on new activities and debt issuance limitations (e.g., restricting debt issuance to "qualifying debt" supporting loan purchase activity and securitization inventory).

Any steps towards receivership would present massive complications to a proper resolution, including raising market concerns about the future performance of GSE MBS and agency debt obligations.[xii] Receivership would also eliminate the value associated with Treasury's warrants, thereby costing taxpayers substantial realizable value. The use of receivership also compromises existing GSE assets, at best creating the need for new legislation to allow these assets to be transferred or reinstated, and at worst permanently destroying substantial value for both the government and private shareholders. The creation of new enterprises in receivership to operate the GSEs' businesses will substantially slow the process of building capital, leaving taxpayers exclusively on the hook in the near-to-medium term. Further, a wind down of the existing GSEs, coupled with substantial value transfer to newly chartered guarantors, fails to resolve existing shareholder litigation and would likely lead to new legal claims (e.g. preference issues, fraudulent conveyance, takings claims) that increase the prospect of a court-imposed solution rather than a policy-led solution.

Finally, our Blueprint provides detailed financial analysis that goes well beyond the details provided by other industry proposals. We have provided estimates of every major facet of the proposed capital build plan (e.g., capital requirements for the new GSEs, capital raise timing, government exit profitability, guarantee fee impact). These important issues are all interrelated, and the government (together with independent financial advisors working on its behalf) can model the resulting impacts of any variations on these and other important parameters and make determinations with respect to optimal public policy.

xii. While this risk might theoretically be managed through careful transaction structuring and robust disclosure, receivership introduces unnecessary risk of confusion and disruption into the mortgage capital markets. Undoubtedly, holders of GSE MBS and debt would immediately file notices of claim (in fear of having their legal claims waived if they do not), initiating a costly and administratively complex decade-long process of claims adjudication in front of FHFA.

Figure 10: Comparison of Safety and Soundness Blueprint to Other Proposals[23]

	'KILL' GSES	2013 SENATE BILL	URBAN INSTITUTE PLAN1	RECAP & RELEASE	2017 MBA PLAN	2017 ICBA PRINCIPLES	SAFETY AND SOUNDNESS BLUEPRINT
Ends the failed business model arbitraging cheap funding	✔	✔	✔	?	✔	✔	✔
Puts new private capital in a first loss position	✔	✔	✔	✔	✔	✔	✔
Maintains the 30-year mortgage	✖	✔	✔	✔	✔	✔	✔
Provides explicit, paid-for, support to ensure stable market for legacy obligations	✖	✔	✔	?	✔	✔	✔
Feasibly maintains market access to non-bank and non-SIFI mortgage originators	✖	✖	✔	✔	✔	✔	✔
Maintains affordable housing initiatives	✖	✖	✔	?	✔	✔	✔
Does not disrupt mortgage rates, home prices, TBA markets and other Agency-related financial markets	✖	✖	✖	✔	✔	✔	✔
Allows Treasury to capture proceeds from monetizing GSE warrants	✖	✖	✖	✔	?	✔	✔
Explicitly limits government support, and allows this limited support to be reduced over time	✔	✖	✖	?	✖	✖	✔
Quick and feasible implementation	✖	✖	✖	✖	✖	✖	✔

Conclusion

FHFA and Treasury together have the ability to resolve the GSE conservatorships while Congress continues to work on additional housing finance reform. Decisive practical action to raise capital can prevent future draws from Treasury (otherwise a near certainty as the GSEs approach zero capital, especially with the impending passage of corporate tax reform), restore the GSEs to a sound and solvent condition (avoiding the specter of future bailouts), and can provide an economic and policy success in this current presidential term. Charting a path forward for Fannie Mae and Freddie Mac that provides taxpayer protection and market liquidity while respecting shareholder rights, would be a significant, long-lasting, and economically beneficial accomplishment for the federal government.

APPENDIX A:

Blueprint Implementation

Blueprint Design and Implementation Schedule

This Blueprint is designed to provide the most feasible, pragmatic, and rational path to GSE reform. It builds upon existing reforms, preserves existing operational infrastructure, and avoids the potential for disruption to the critical MBS and TBA markets. There is no complex and uncertain receivership process, and no creation of new mortgage market infrastructure. The plan can be implemented under existing legal authority through the following steps:

1. Dividend Suspension

The FHFA Director has the authority to suspend dividends to all shareholders, including Treasury. Doing so would allow the GSEs to retain their earnings in a lock-box, serving as a critical capital buffer against potential losses driven by tax reform or interest rate variability and beginning the process of building permanent capital. This capital retention can initially be structured as a change to how often the dividends are paid (e.g., annual or biennial) or as an increase to the Minimum Capital Reserve Amount, to minimize budgetary impacts while the other pieces of the Blueprint are being put in place.[xiii]

2. Amendment of the Existing Preferred Stock Purchase Agreement

FHFA together with Treasury can agree to execute a "Fourth Amendment" to the existing Preferred Stock Purchase Agreement to reflect and apply the original economic terms of the backstop. Such an amendment would have the effect of reducing the balance of Treasury's Preferred Stock (taking into account past payments in excess of 10%) to approximately $6.3 billion.[xiv] This would enable both Enterprises to prudently rebuild equity capital and would likely resolve all outstanding litigation pertaining to the Net Worth Sweep.

3. Capital Restoration Plan

The FHFA Director has the authority to implement new capital requirements, subjecting the GSEs to new minimums (e.g., Primary Leverage Ratio of 3.0%, Secondary Leverage Ratio of 5.0%, minimum Core Capital / Risk Weighted Assets of 8.5%), and to request that the GSEs develop and submit capital restoration plans. FHFA's capital requirements should also clearly delineate treatment of credit risk transfer activities.

4. Preferred Stock Conversion and Warrant Exercise

Treasury can acquire 79.9% of GSEs' common stock at its discretion through the exercise of its warrants and agree to equitize any remaining SPS balance at the time of primary stock offerings. Junior preferred stockholders could contribute to the capital build by converting or exchanging some or all of their existing stock in a manner that is constructive to building capital. Private common stockholders could potentially contribute to building capital as well through participation in future common stock issuances.

5. Issuance of Primary Capital

The GSEs can conduct initial public offerings estimated at $40 billion (combined for Fannie and Freddie) in 2018, and additional follow-on offerings of approximately $40 billion in 2019. This common stock issuance can be augmented by the issuance of new junior preferred stock of approximately $25 billion in 2020, completing the capital build. As noted earlier, Treasury's experience with AIG and Ally Financial provides a good point of reference for successfully executing such public offerings.

6. Secondary Share Sales

Full government disposition of its ownership stakes occurs via secondary sales into capital markets over the course of 2019 to 2020. These sales would be similar in size and timing to Treasury's AIG stock disposition. If the government wishes to extract value sooner, it could accelerate its exit by executing a partial secondary sale in parallel with the initial public offering in 2018. There are, however, trade-offs between secondary and primary issuance sizes and timing, dictated by market capacity.

xiii. According to a May 2012 presentation for the Office of Management and Budget at the White House, Treasury proposed "a minimum net worth amount of $10,000,000,000 for the quarterly reporting periods between January 1, 2013 and December 31, 2019." Treasury indicated that the "economic rationale behind [this] minimum net worth amount is to avoid having unnecessary PSPA draws that result from price volatility in the GSEs mortgage investment portfolios."

xiv. This calculation is inclusive of dividends paid on March 31, 2017, but not dividends scheduled to be paid on June 30, 2017.

The diagram below provides an illustrative timeline:

Figure 11: Full implementation and Treasury exit by 2020

	2017			2018	2019	2020	$ CAPITAL	%ASSETS[1]
	Q2	Q3	Q4					
Turn off Net Worth Sweep and retain earnings until regulated minimum first-loss equity is built[2]	◆						$62B	+1.2%
Adjust SPS balance to reflect original contractual terms		◆						
Agree to terms to equitize remaining SPS balance, and partially equitize JPS[3]			◆					
Establish regulatory framework and mechanics for oversight of G-fees			◆					
Announce **future**, not immediate, exit from conservatorship			◆					
Companies issue primary common equity through an IPO				◆			$40B	+0.8%
Companies issue primary common equity through a follow-on offering					◆		$40B	+0.8%
Companies issue new junior preferred stock						◆	$25B	+0.5%
Treasury sells remaining equity interest via secondary offerings								
GSEs emerge as rebuilt organizations and taxpayers profitably exit their only remaining financial crisis federal financial assistance program						✔	**$167B**	**3.25%**

Source: Company filings, Moelis estimates

1. Based projected 2020 consolidated total assets of $5.1 trillion
2. Retained earnings net of preferred and common dividends
3. Conversion price and terms can be pre-established (consistent with the approach used by Treasury in AIG), or can be set at the IPO price

APPENDIX B:

Company Projections and Assumptions

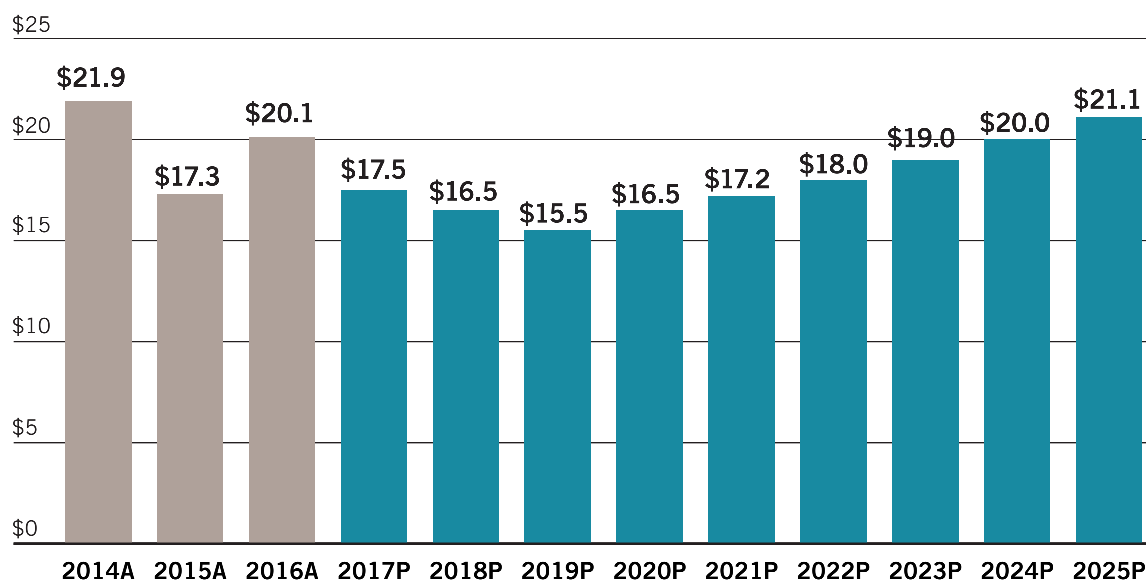
Company Projections and Assumptions

The analysis contained herein is based on three-statement (e.g., balance sheet, income statement, cash flow statement) models for each of Fannie Mae and Freddie Mac, prepared by Moelis & Company LLC. These models are used to generate forward-looking earnings and balance sheet projections. It should be noted that the models, and the resulting projections, rely on a number of forward looking assumptions and estimates, including MBS market issuance volumes (assumed to follow MBA projections in the near-term, and grow modestly thereafter), default and prepayment rates for the existing guarantee portfolio (assumed to follow current performance trends), and retained mortgage portfolio size (assumed to wind down to approximately 90% of statutory maximums).

We further assume 70 basis points for average guarantee fees on new originations (less an ongoing 10 basis points that is redirected to the Treasury pursuant to the Temporary Payroll Tax Cut Continuation Act of 2011, consistent with the terms of existing legislation). We model the payment of a 50 basis point annual PSPA Commitment Fee (calculated on the then-prevailing commitment balance). Our projections assume flat purchase and refinancing single-family market-share for each GSE, which (given the MBA's reduced issuance projections, combined with the reduction in investment portfolio assets) creates a modest reduction in total assets (from approximately $5.3 trillion to approximately $5.1 trillion) through 2020 year-end.

As detailed below, our projections estimate an average of over $17 billion per annum in post-tax net income for the GSEs, on a combined basis, which is broadly consistent with other third-party estimates (e.g.,CBO, OMB).

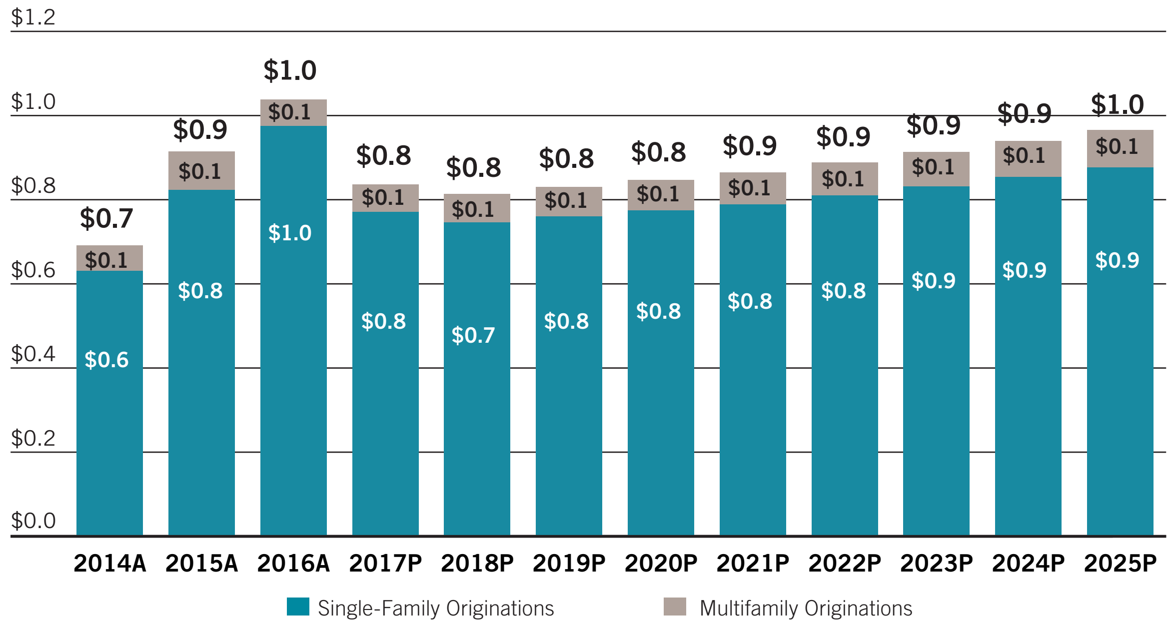
Figure 12: Summary Consolidated Earnings Forecast
$ Billions at December 31,



	2014A	2015A	2016A	2017P	2018P	2019P	2020P	2021P	2022P	2023P	2024P	2025P
Net interest income	$18.3	$15.9	$12.7	$11.9	$10.2	$9.6	$9.3	$8.9	$8.4	$8.0	$7.3	$7.0
Guarantee fees	17.5	18.8	20.7	22.6	24.0	25.3	26.6	28.0	29.5	30.9	32.4	34.0
Provisions (benefit) for loan losses	(3.9)	(3.5)	(3.0)	1.4	2.3	4.0	3.8	3.6	3.6	3.7	3.6	3.5
Other expenses, net[1]	7.5	12.7	6.4	6.3	6.6	6.9	6.9	6.9	6.6	6.0	5.5	5.0
Earnings before tax	$32.2	$25.5	$30.0	$26.9	$25.3	$23.9	$25.3	$26.5	$27.6	$29.3	$30.7	$32.4
Net Income	**$21.9**	**$17.3**	**$20.1**	**$17.5**	**$16.5**	**$15.5**	**$16.5**	**$17.2**	**$18.0**	**$19.0**	**$20.0**	**$21.1**

Source: Company filings, Moelis estimates
Note: Projections assume 35% corporate tax rate
1. Includes fees and other income, other non-interest expenses, administrative expenses, other operating expenses, other income, other gains (losses) on investment securities recognized in earnings and one-time items

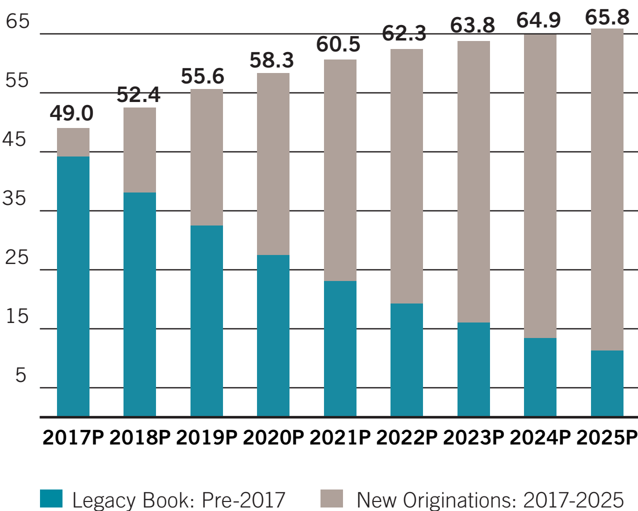
Figure 13: Summary Consolidated Origination Volume Forecast
$ Trillions at December 31,

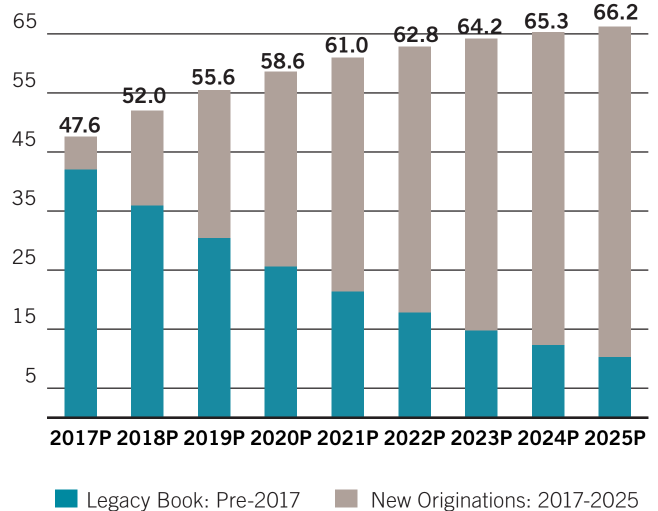


Single-Family New Origination G-Fees (bps)	62.9	60.5	56.7	65.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
Single-Family Market Share %	56%	54%	52%	48%	47%	46%	46%	46%	46%	45%	45%	45%

Source: Company filings, Mortgage Bankers Association, Moelis estimates

Figure 14: Weighted Average G-Fee Contribution Forecast
Basis Points at December 31,





Source: Company filings, Moelis estimates

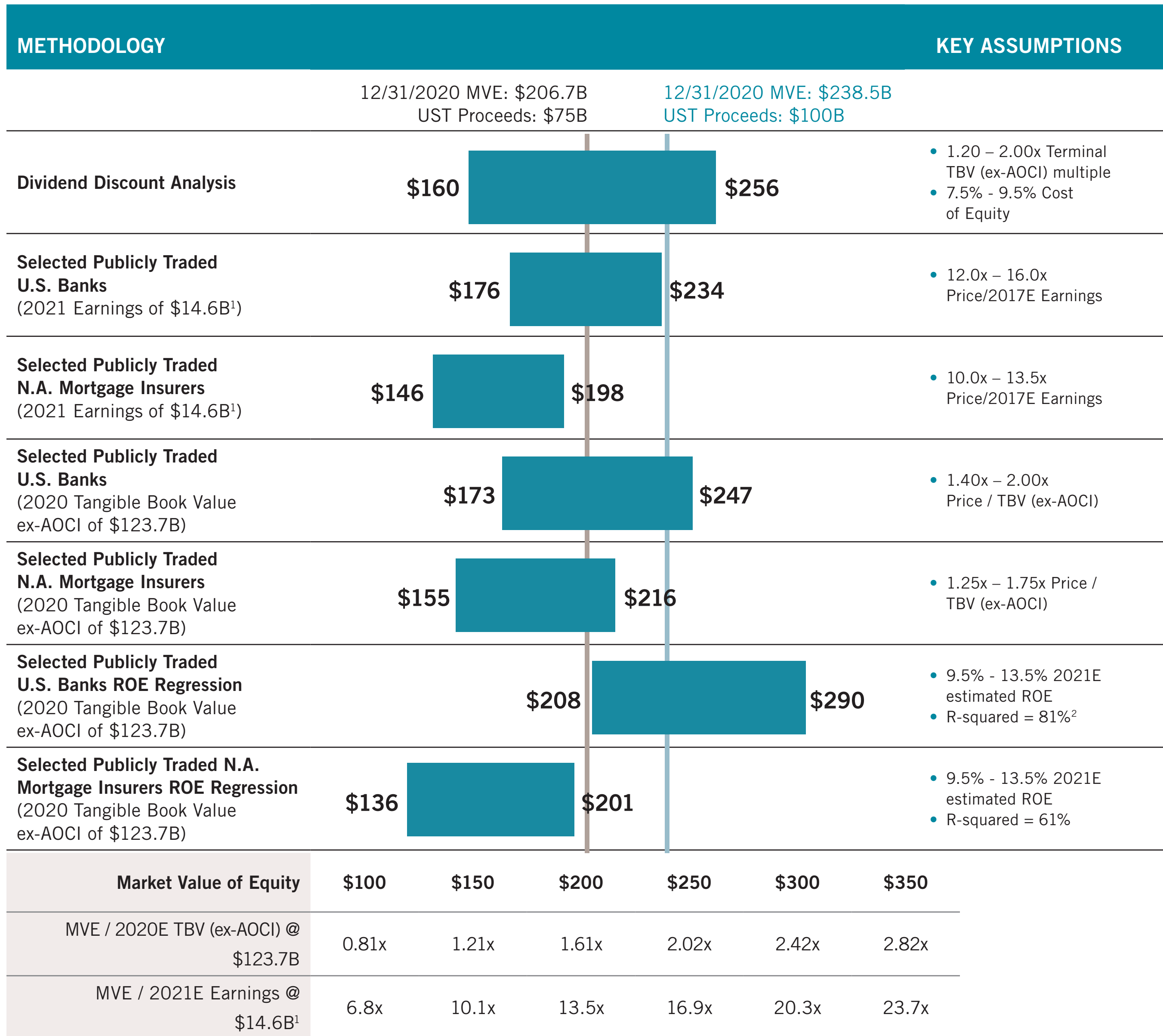
APPENDIX C:

Illustrative Valuation Analysis

Illustrative Valuation

Our earnings and balance sheet projections are utilized in producing illustrative pro-forma 2020 equity valuations. The primary metrics used in this analysis are estimates of forward looking (2021 projected) Net Income available to common shareholders, 2020 Book Value (specifically Tangible Book Value, excluding AOCI), along with Return on Equity projections (which are used in determination of estimated Tangible Book Value, excluding AOCI multiples). Using traditional investment analyses, which include a dividend discount analysis, and selected public companies analyses, we estimate the following illustrative valuation ranges for the fully capitalized Enterprises, on a consolidated basis, as of 2020 year-end. For reference, we have annotated the valuation points that are consistent with $75 billion and $100 billion of Treasury proceeds, using our base case capital raise assumptions.

Figure 15: Summary Illustrative Equity Valuation Ranges



Market Value of Equity	$100	$150	$200	$250	$300	$350
MVE / 2020E TBV (ex-AOCI) @ $123.7B	0.81x	1.21x	1.61x	2.02x	2.42x	2.82x
MVE / 2021E Earnings @ $14.6B[1]	6.8x	10.1x	13.5x	16.9x	20.3x	23.7x

Source: CapitalIQ, SNL, Moelis estimates. Market data as of April 30, 2017

Note: Selected publicly traded US banks include JPMorgan Chase, Wells Fargo, Bank of America, U.S. Bancorp, PNC Financial, BB&T, SunTrust, M&T Bank, KeyCorp, Fifth Third Bank, Regions Financial and Huntington Bank. Selected publicly traded North American mortgage insurers include Arch Capital Group, Radian, MGIC, Essent, and Genworth MI Canada. Moelis believes that the recapitalized GSEs would trade at a premium to the selected N.A. mortgage insurers because, among other considerations, mortgage insurers are exposed to greater credit risk on mortgages as they insure the first loss on mortgages, and the GSEs are much larger businesses.

1. Net income available to common figures reflect aggregate GSE net income ($17.2 billion projected in 2021), less preferred dividends ($2.6billion per annum), which are projected to resume in full in 2021, following completion of the capital build
2. Selected Publicly Traded U.S. Banks ROE regression analysis excludes BB&T and M&T Bank.

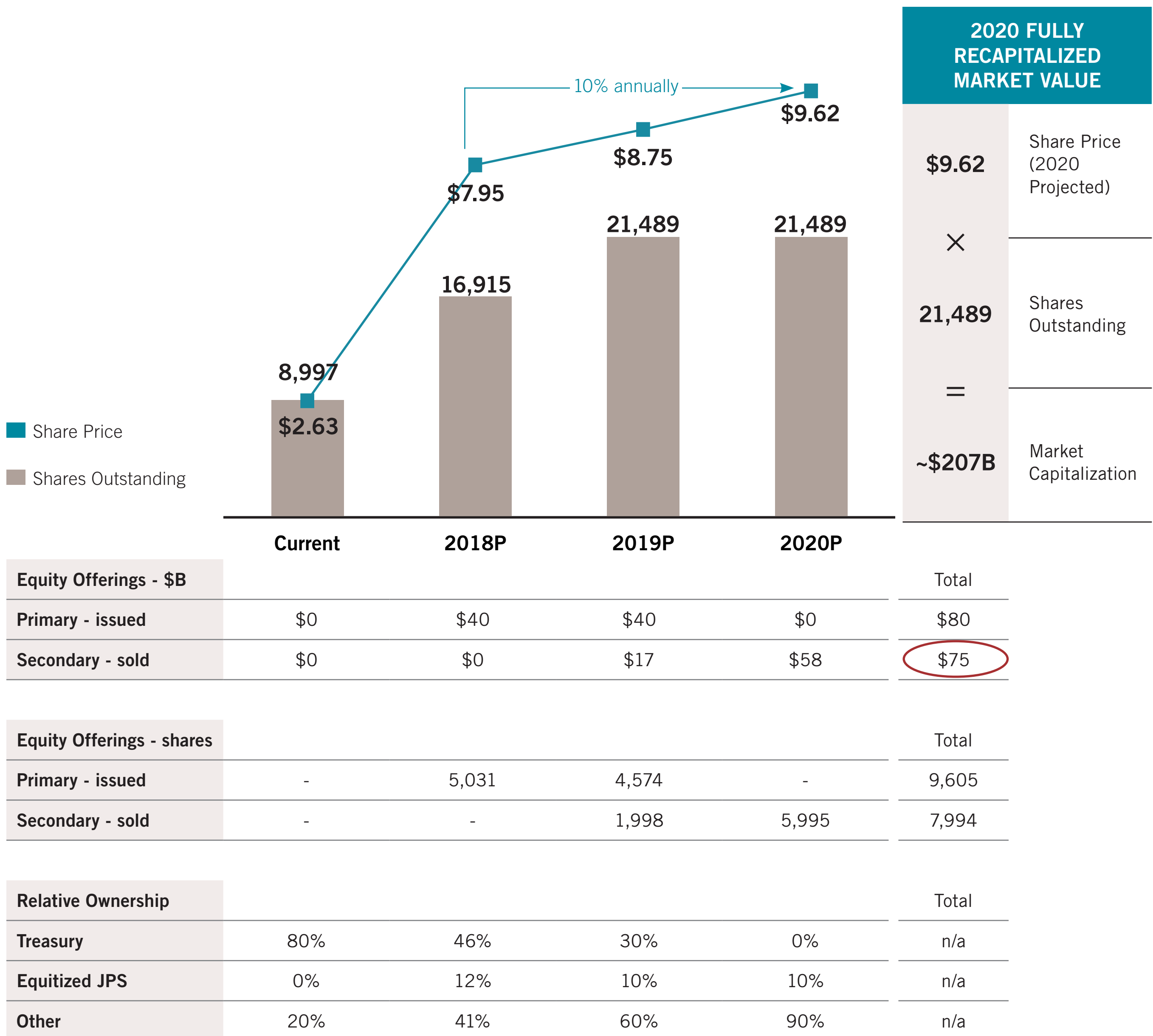
APPENDIX D:
Illustrative Capital Raise Scenarios

Capital Raise Analysis

The financial projections and valuation estimates are used in performing analysis of a capital raise scenario, designed to achieve full capital build at the GSEs by 2020 year-end (through a combination of retained earnings, preferred stock conversion, and new issuance). The below scenario, by construction, achieves back-end (2020) fully-distributed market capitalizations consistent with the prior valuation analysis, effectively backing into estimates of share issuance volumes and resultant dilution. Included in this analysis is a series of secondary share sales in 2019 and 2020, representing disposition of Treasury's shares (assumed to be received in relation to exercise of existing warrants for 79.9% of Fannie Mae and Freddie Mac common stock).[xv] The following charts illustrate two valuation cases, one consistent with $75 billion of proceeds to Treasury, and the second consistent with $100 billion of proceeds. Both rely on identical assumptions relating to 2020 year-end core capital (3.25%), as well as identical capital raise assumptions ($40 billion of primary equity issued in 2018, followed by an additional $40 billion in 2019), consistent with projections illustrated elsewhere in this Blueprint.

xv. Future share price projections are inherently uncertain, and are dependent on a variety of external factors (including, but not limited to, company performance, market environment, ultimate capital requirements, guarantee fee assumptions, and treatment of senior and junior preferred shares).

Figure 16: Illustrative Recapitalization Timeline - $75B Treasury Proceeds



Equity Offerings - $B	Current	2018P	2019P	2020P	Total
Primary - issued	$0	$40	$40	$0	$80
Secondary - sold	$0	$0	$17	$58	$75

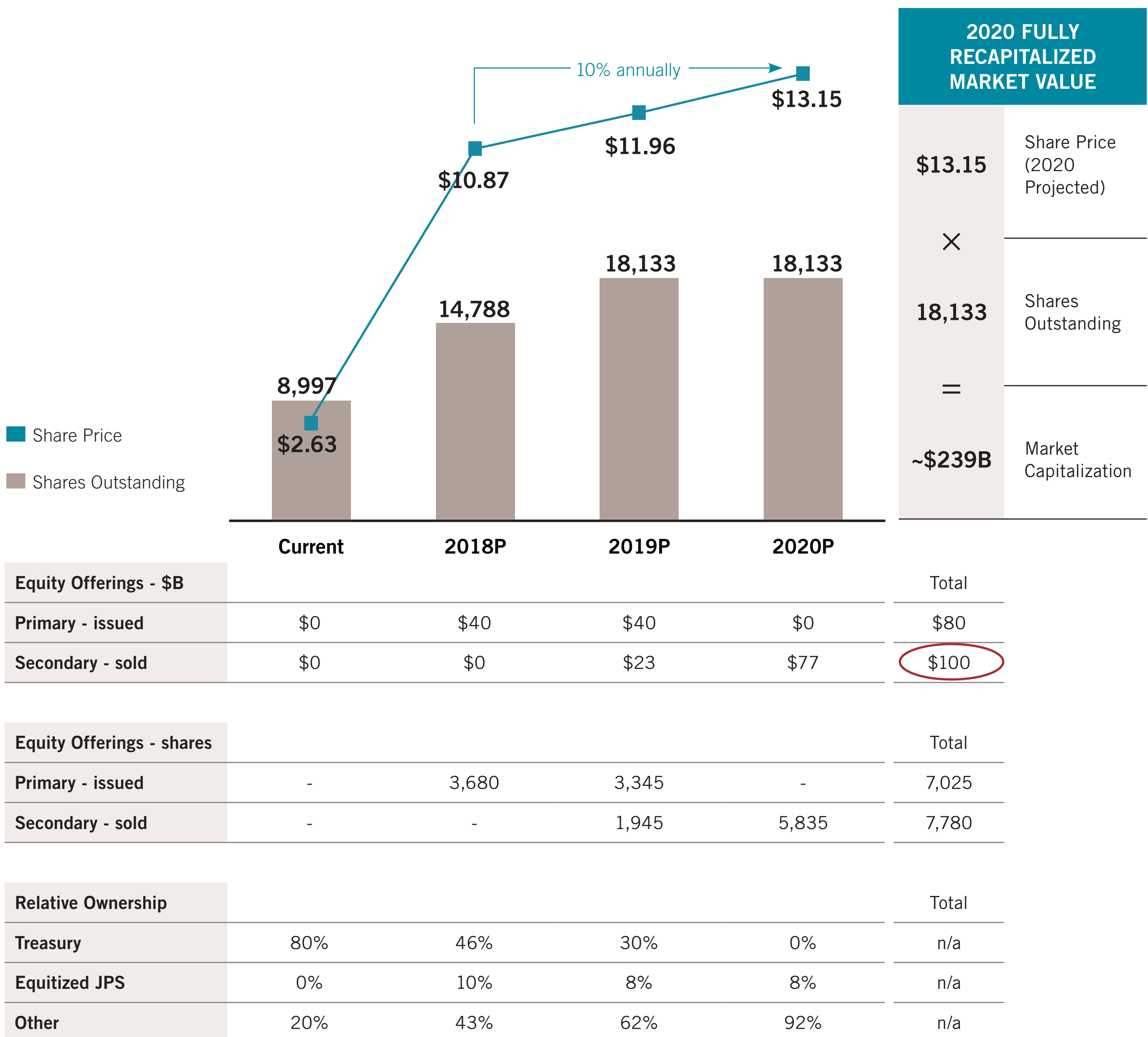
Equity Offerings - shares	Current	2018P	2019P	2020P	Total
Primary - issued	-	5,031	4,574	-	9,605
Secondary - sold	-	-	1,998	5,995	7,994

Relative Ownership	Current	2018P	2019P	2020P	Total
Treasury	80%	46%	30%	0%	n/a
Equitized JPS	0%	12%	10%	10%	n/a
Other	20%	41%	60%	90%	n/a

Source: Company filings, Moelis estimates, CapitalIQ, Market data as of April 30, 2017

1. Illustrative transaction analysis assumes Treasury exercises it's warrants for 79.9% ownership immediately prior to an IPO and receives 7.2 billion shares in the Enterprises (on a consolidated basis). This could also be executed by removing Treasury's anti-dilution ratchet to attract new private capital. At the IPO date, Treasury and the equitizing portion of junior preferred stock then receive approximately 0.8 billion and 2.1 billion shares, respectively, based on the IPO price and equitized balance then outstanding. Post IPO, Treasury would own 8.0 billion shares representing 47% of the then outstanding common shares. Treasury, and the equitized junior preferred stock, ownership stakes are then further diluted by new shares issued in 2019 to raise primary capital. This is broadly consistent with the approach Treasury took to attract private capital in its exit from Ally Financial as well as other TARP investments.

Figure 17: Illustrative Recapitalization Timeline - $100B Treasury Proceeds



Equity Offerings - $B	Current	2018P	2019P	2020P	Total
Primary - issued	$0	$40	$40	$0	$80
Secondary - sold	$0	$0	$23	$77	$100

Equity Offerings - shares	Current	2018P	2019P	2020P	Total
Primary - issued	-	3,680	3,345	-	7,025
Secondary - sold	-	-	1,945	5,835	7,780

Relative Ownership	Current	2018P	2019P	2020P	Total
Treasury	80%	46%	30%	0%	n/a
Equitized JPS	0%	10%	8%	8%	n/a
Other	20%	43%	62%	92%	n/a

Source: Company filings, Moelis estimates, CapitalIQ, Market data as of April 30, 2017

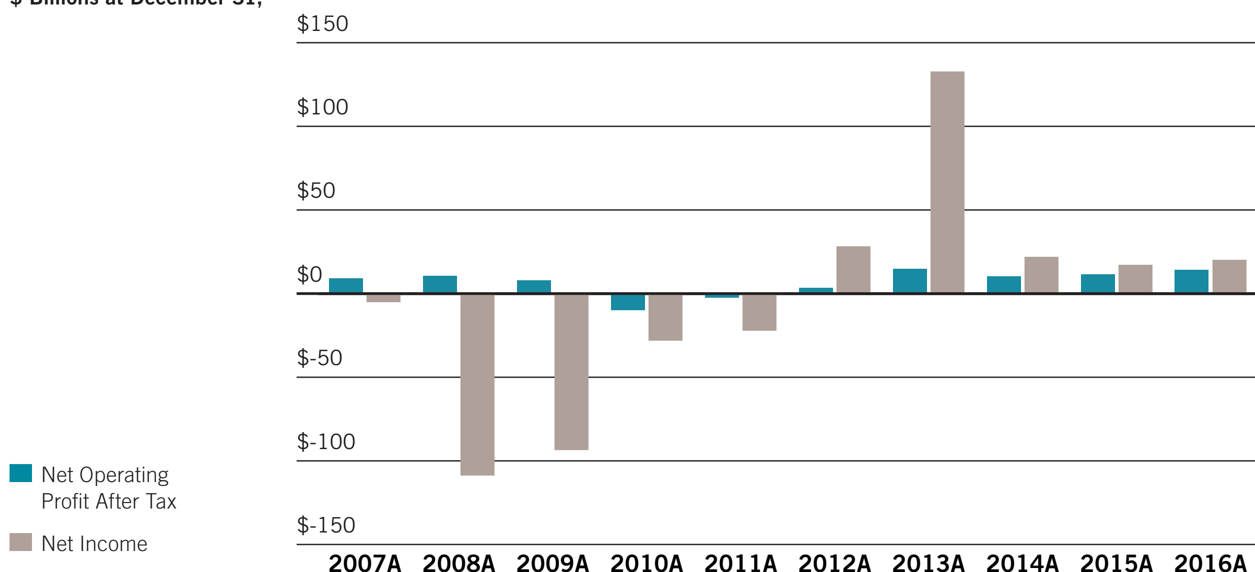
1. Illustrative transaction analysis assumes Treasury exercises it's warrants for 79.9% ownership immediately prior to an IPO and receives 7.2 billion shares in the Enterprises (on a consolidated basis). This could also be executed by removing Treasury's anti-dilution ratchet to attract new private capital. At the IPO date, Treasury and the equitizing portion of junior preferred stock then receive approximately 0.6 billion and 1.5 billion shares, respectively, based on the IPO price and equitized balance then outstanding. Post IPO, Treasury would own 7.8 billion shares representing 46% of the then outstanding common shares. Treasury, and the equitized junior preferred stock, ownership stakes are then further diluted by new shares issued in 2019 to raise primary capital. This is broadly consistent with the approach Treasury took to attract private capital in its exit from Ally Financial as well as other TARP investments.

APPENDIX E:

Historical Financials

Figure 18: GSE Net Operating Profit vs. Net Income

$ Billions at December 31,



Net Operating Profit After Tax

	2007A	2008A	2009A	2010A	2011A	2012A	2013A	2014A	2015A	2016A	Total
Net operating revenue[1]	$20.0	$29.7	$37.3	$27.0	$32.2	$35.8	$38.2	$32.5	$35.4	$35.0	$323.0
Credit losses[2]	(1.8)	(10.3)	(21.5)	(37.8)	(31.8)	(26.3)	(9.3)	(9.9)	(10.0)	(5.4)	(164.0)
Admin expen. & TCCA fees	(4.3)	(3.1)	(3.9)	(4.2)	(3.9)	(4.3)	(5.9)	(6.8)	(7.6)	(7.7)	(51.7)
Taxes @ 35.0%	(4.8)	(5.7)	(4.2)	5.3	1.2	(1.8)	(8.0)	(5.5)	(6.3)	(7.7)	(37.6)
Net Operating Profit After Tax	**$9.0**	**$10.6**	**$7.8**	**($9.8)**	**($2.3)**	**$3.4**	**$14.9**	**$10.3**	**$11.6**	**$14.2**	**$69.8**

Net Income

	2007A	2008A	2009A	2010A	2011A	2012A	2013A	2014A	2015A	2016A	Total
Net operating revenue[1]	$20.0	$29.7	$37.3	$27.0	$32.2	$35.8	$38.2	$32.5	$35.4	$35.0	$323.0
Credit related expenses[3]	(8.1)	(47.3)	(103.4)	(44.5)	(38.8)	(0.8)	14.4	3.3	1.5	2.0	(221.7)
Admin expen. & TCCA fees	(4.3)	(3.1)	(3.9)	(4.2)	(3.9)	(4.3)	(5.9)	(6.8)	(7.6)	(7.7)	(51.7)
Other income (expen.), net	(9.6)	(11.4)	(2.0)	0.3	0.5	0.6	6.5	7.3	(2.6)	(0.9)	(11.3)
Other non-recurring & non-cash expen.[4]	(9.2)	(57.4)	(23.4)	(7.6)	(12.7)	(4.6)	10.8	(4.2)	(1.3)	1.5	(107.9)
Taxes - DTA valuation (allow.), release	0.0	(53.0)	(29.8)	(8.7)	(10.1)	9.1	90.0	0.4	0.2	0.0	(2.0)
Taxes - other	6.0	33.7	31.6	9.7	10.6	(7.6)	(21.3)	(10.6)	(8.3)	(9.8)	33.9
Net Income	**($5.2)**	**($108.8)**	**($93.6)**	**($28.0)**	**($22.1)**	**$28.2**	**$132.7**	**$21.9**	**$17.3**	**$20.1**	**($37.5)**

Memo: Non-Cash & Non-Recurring Variances

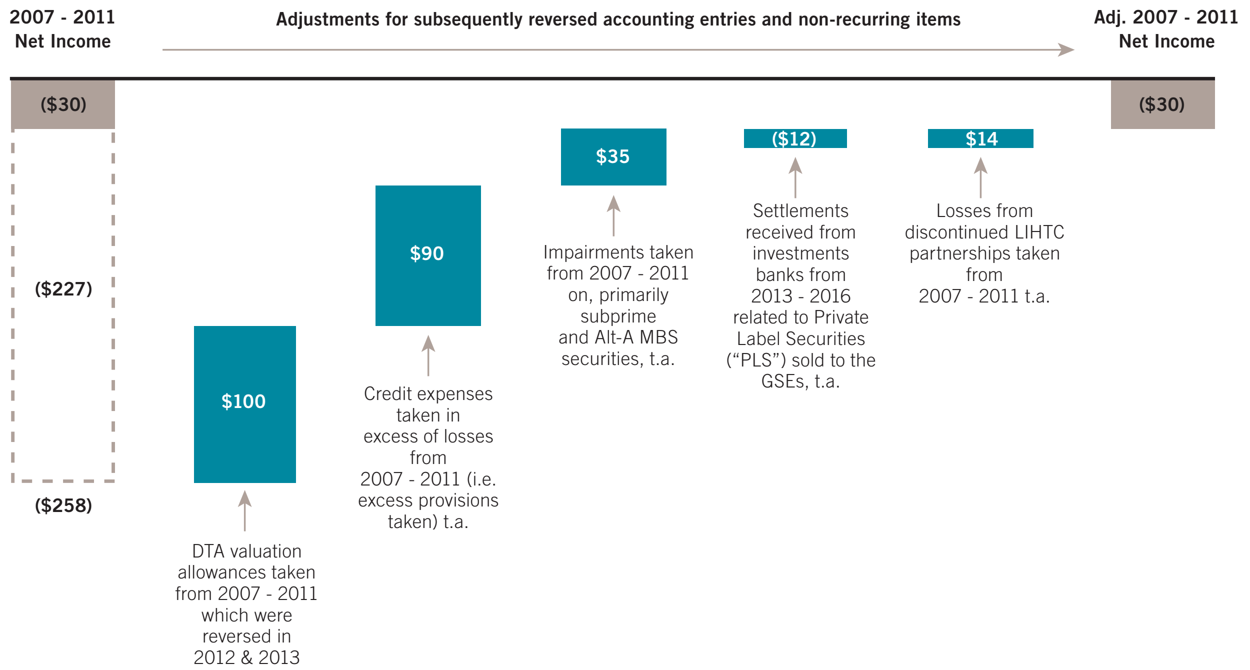
	2007A	2008A	2009A	2010A	2011A	2012A	2013A	2014A	2015A	2016A	Total
Credit expen. in excess of losses, t.a.	($4.1)	($24.1)	($53.2)	($4.4)	($4.5)	$16.6	$15.4	$8.5	$7.5	$4.8	($37.5)
Other non-recurring & non-cash expen., t.a.[4]	(6.0)	(37.3)	(15.2)	(4.9)	(8.2)	(3.0)	7.0	(2.7)	(0.8)	1.0	(70.1)
Taxes - DTA valuation (allow.), release	0.0	(53.0)	(29.8)	(8.7)	(10.1)	9.1	90.0	0.4	0.2	0.0	(2.0)
Total Adjustments	**($10.0)**	**($114.4)**	**($98.2)**	**($18.0)**	**($22.9)**	**$22.7**	**$112.4**	**$6.2**	**$6.8**	**$5.8**	**($109.6)**

Source: Company filings

Note: Selected figures tax affected at 35% corporate tax rate

1. Net operating revenue includes net interest income, g-fee income, other cash related income, losses on extinguishment of debt, and interest expense on accruals of interest rate swaps
2. 2015 credit losses excludes adoption of bulletin policy changes
3. Includes provisions for loan losses and foreclosed property expenses
4. Includes losses from partnership and low income housing tax credit investments, Other-than-Temporary-Impairments, and fair value gains (losses) net of interest expense on accruals of interest rate swaps

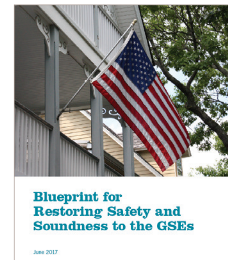
Figure 19: Adjusted Net Losses 2007 – 2011
$ Billions



Source: Company filings
Note: Selected figures tax affected at 35% corporate tax rate

APPENDIX F:

Plan Comparison Tables[10] [11]



Common Features	ICBA Principles	MBA Plan	Safety and Soundness Blueprint
Preserve operational infrastructure and processes	Yes	Yes	Yes
Preserve TBA market, single-family lender access, multifamily	Yes	Yes	Yes
Preserve duty to serve, affordable housing mission	Yes	Yes	Yes
Capital Standards (Overview)	Significantly enhanced capital standards	Significantly enhanced capital standards	Significantly enhanced capital standards
	FHFA to establish specific levels (per HERA)	Regulator granted authority to set specific levels	FHFA to establish specific levels (per HERA)
	"Prudent," and sufficient to ensure "well capitalized" GSEs, which do not require "additional taxpayers support"	"Consistent with" those of "banks and... insurance companies"	Provisional standards designed to be consistent with insurance and bank requirements
Capital Standards (Approach)	Detail not provided	Risk-based capital, Leverage Ratio, Stress Testing	Risk-based capital, Leverage Ratio, Stress Testing
Credit Risk Transfer	Capital plan to include CRT	Capital relief granted for approved CRT structures	Capital relief granted for approved CRT structures
	CRT should occur when economic returns are met	Capital relief limited to true risk transfer, ahead of the GSEs	Capital relief limited to true risk transfer, risk transfer should remain an economic decision
Investor Purpose	Utility-level returns/risks	Utility-level returns/risks	Highly regulated returns/risks
Wind down of investment portfolios	Not explicitly addressed	Substantially reduced in size	Continued reductions in size
Government retains all funds received to date, and proceeds from future share sales	Yes	Yes	Yes

Variations	ICBA Principles	MBA Plan	Safety and Soundness Blueprint
Ongoing Government Support	Explicit government guarantee of MBS	Explicit government guarantee of MBS	Limited, explicit, catastrophic, support of the GSEs
Government Support Mechanism	Mortgage insurance fund, similar to FDIC's Deposit Insurance Fund, funded via ongoing premiums	Mortgage insurance fund, similar to FDIC's Deposit Insurance Fund, funded via ongoing premiums	Existing PSPA Agreements, reduced in size over time, with Treasury receiving an ongoing commitment fee
Transition Process	Existing GSEs converted to shareholder-owned utilities	Wind-down of existing GSEs (via Bridge Bank or Operating Subsidiary model)	Capital raised at existing GSE legal entities
	Charters converted to accommodate new GSE purpose	Newly chartered companies granted	No complex receivership process, or need for new charters
	Enterprises recapitalized, Government divests ownership	New Guarantors recapitalized, Government divests ownership	Enterprises recapitalized, Government divests ownership
Enactment	New legislation required to establish explicit Guarantee, and to amend existing charters	New legislation required to establish explicit Guarantee, and to create new charters	Can be enacted under existing law, while congress works on additional housing finance reform legislation
Treatment of the Net Worth Sweep	Eliminates the Net Worth Sweep	Not directly addressed	Eliminates the Net Worth Sweep
Transitions risk of existing GSE portfolios to private investors	Yes	Dependent on structure (some or all risk may be left with the taxpayer)	Yes
Budgetary Impact	Substantial gain on sale of Treasury's equity stake	Some gains through share issuance, reduced due to structure	Substantial gain on sale of Treasury's equity stake
	Not quantified	Not quantified	Estimated at $75-100billion
Number of Guarantors	2	2 or more	2
Capital Standards, Further Detail	No figures provided	No figures provided	Core Capital + CRT >= 5.0% Assets & Guarantees Core Capital >= 3.0% Assets & Guarantees Core Capital >= 8.5% Risk Weighted Assets

APPENDIX G:

Acronyms Index

AOCI: Accumulated Other Comprehensive Income – a line item in the shareholders' equity section of the balance sheet that includes income that is not reported in the income statement such as unrealized gains/losses on certain types of investments, gains/losses on pension funds and foreign currency translations, and flows directly to equity

CAS: Connective Avenue Securities – a Fannie Mae program to issue CRT securities

CAGR: Compound Annual Growth Rate – the mean annual growth rate percentage over a specified period of time

CBO: Congressional Budget Office – an independent office that produces analyses of budgetary and economic issues to support the Congressional budget process

CRT: Credit Risk Transfer – a class of securities intended to move credit risk on loans held by Fannie and Freddie from the entities to third-party investors, thus reducing the overall risk of Fannie and Freddie

CSP: Common Securitization Platform – a technology and operational platform that is being developed through a joint venture between Fannie and Freddie that will allow the issuance of a single mortgage-backed security that will be issued by both Fannie and Freddie

DTA: Deferred Tax Asset – an accounting asset that represents the value of future tax relief a company expects to capture due to taxes paid in advance or overpaid taxes in the past

DTI: Debt-to-Income – a financial ratio used to measure the riskiness of a mortgage loan that gauges a borrower's ability to manage payments with higher DTI ratios generally seen as higher risk

FDIA: Federal Deposit Insurance Act – legislation enacted in 1950 that governs the Federal Deposit Insurance Corporation (FDIC)

FDIC: Federal Deposit Insurance Corporation – a U.S. government corporation that provides deposit insurance to depositors in U.S. banks

FHA: Federal Housing Administration – a federal agency that provides mortgage insurance on loans made by FHA-approved lenders

FHFA: Federal Housing Finance Agency – the primary regulator of Fannie Mae and Freddie Mac

GSEs: Government-Sponsored Enterprises – specifically, Fannie Mae and Freddie Mac

HERA: The Housing and Economic Recovery Act – legislation enacted in July 2008 to address the subprime mortgage crisis intended to restore confidence in Fannie and Freddie and leading to their conservatorship

IAIS: International Association of Insurance Supervisors – a voluntary membership-driven organization of insurance supervisors and regulators from more than 200 jurisdictions in nearly 140 countries

ICBA: Independent Community Bankers of America – the primary trade group for small U.S. banks

IPO: Initial Public Offering – the sale of the stock of a private company onto a public exchange

LTV: Loan-to-Value – a financial ratio used to measure the riskiness of a mortgage loan that gauges how valuable the collateral of the loan compares to the loan balance with higher LTV ratios generally seen as higher risk

MBA: Mortgage Bankers Association – the U.S. national association representing the real estate finance industry

MBS: Mortgage-Backed Security – a type of asset-backed security that is secured by a mortgage or collection of mortgages

OFHEO: Office of Federal Housing Enterprise Oversight – a federal regulatory body that formerly oversaw Fannie and Freddie that was replaced in 2008 by the FHFA

OMB: Office of Management and Budget – an office that assists the President of the United States in budget development and execution among other responsibilities

PMIERs: Private Mortgage Insurer Eligibility Requirements – the set of requirements for mortgage insurers to be approved to insure loans acquired by Fannie and Freddie

PSPA: Preferred Stock Purchase Agreement – specifically refers to the preferred stock purchase agreement entered into by the U.S. Treasury and each of Fannie and Freddie in 2008 that governs the preferred stock investment by the Treasury into each entity

RBC: Risk-based capital – A capital requirement metric based on the riskiness of a company's assets

ROE: Return on Equity – a measure of profitability equal to the amount of net income returned as a percentage of shareholders' equity

RWA: Risk-Weighted Assets – a regulatory capital metric used to determine the riskiness of an entity's assets for which capital will need be to held against

SBA: Small Business Administration – a federal agency that provides assistance to small businesses

SPS: Senior Preferred Stock – the preferred stock security owned by the U.S. Treasury received from its investment in each of Fannie and Freddie

SSFA: Simplified Supervisory Formula Approach – a method to calculate the risk weights for securitization exposures

STACRs: Structured Agency Credit Risk – unsecured, unguaranteed debt obligations issued by Freddie Mac that pass on the credit risk of pools of mortgages

TALF: Term Asset-Backed Securities Loan Facility – a U.S. Federal Reserve funding facility that supported the issuance of asset-backed securities collateralized by consumer and small business loans

TARP: Troubled Asset Relief Program – a group of programs created and run by the U.S. Treasury to stabilize the country's financial system during the 2008 financial crisis

TBA: To Be Announced – a phrase used to describe a market for securities in which the actual securities to be delivered are not designated at the time the trade is made

TCCA: Temporary Payroll Tax Cut Continuation Act – legislation enacted in 2011 to fund an extension of the payroll tax cut which levied a 10 basis point fee on Fannie and Freddie for all loans delivered effective April 2012

VA: Department of Veteran Affairs – a federal agency that provides housing support to Veterans

APPENDIX H:

Endnotes

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