Analysis of the Viability of Fannie Mae's Multifamily Business Operating without a Government Guarantee -

Response to FHFA Scorecard Directive

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I. EXECUTIVE SUMMARY

A. Introduction

On February 21, 2012, FHFA sent Congress its "Strategic Plan for Enterprise Conservatorships: The Next Chapter in a Story that Needs an Ending" (the "FHFA Strategic Plan"). The plan sets out a number of near-term objectives for Fannie Mae and Freddie Mac (the "Enterprises"). Among these objectives is the requirement that each Enterprise "undertake a market analysis of the viability of its multifamily operations without government guarantees" operating "on a stand-alone basis after attracting private capital and adjusting pricing, if needed to attract and retain that capital." This requirement was restated as a directive to Fannie Mae and Freddie Mac in the 2012 Conservatorship Scorecard which also set a submission deadline of December 31, 2012. Over the last several months, Fannie Mae has engaged in a rigorous analysis of these questions. The results of that analysis are discussed in this paper.

We begin our discussion with an overview of the multifamily housing market and key differences between multifamily and single-family financing, followed by a description of Fannie Mae's existing multifamily business ("Multifamily"), its customers and key financial and credit performance data, and how it accesses funding from the capital markets. We conclude our discussion of the existing business model by reviewing the various forms of government support Fannie Mae receives under its federal charter (the "Charter"), as well as the specific mission requirements it has been assigned over time by Congress and by Enterprise regulators.

The paper turns next to the analysis undertaken by Fannie Mae in response to the Scorecard directive: an assessment of the viability of the Multifamily business in the absence of government support, and specifically its ability to attract private capital to fund the business. In commencing this analysis, Fannie Mae sought clarification from FHFA on a number of points and, with the benefit of those discussions, arrived at the following more detailed set of parameters to inform our analysis:

- The entity that would be separated from Fannie Mae ("NewCo") would include all of the required personnel, systems and customer relationships of Multifamily's existing business.
- The existing multifamily guarantee obligations (the "Legacy Book"), including those on whole loans and mortgage-backed securities ("MBS"), would stay with Fannie Mae, but NewCo would continue to manage the Legacy Book pursuant to an asset management agreement with Fannie Mae.
- The Legacy Book would continue to benefit from U.S. Treasury support under the Senior Preferred Stock Purchase Agreement (the "SPSPA").
- "Viability" will be assessed on the basis of NewCo's ability to raise new equity capital from third-party private investors in amounts sufficient to support NewCo's

business, but with no required minimum level of business volume or prescribed scope of business activities.

- NewCo may not rely on Fannie Mae as a source of capital for the ongoing business.
- The equity capital raised by NewCo must be clearly subordinate to any other capital or liabilities of NewCo.
- NewCo would not benefit from a Fannie Mae or government guarantee on new business nor would NewCo have a “transition period” or any “temporary” or “partial” guarantees available for new loans. All new business would be financed entirely with private market debt and equity capital.
- NewCo would not benefit from the Charter privileges historically enjoyed by Fannie Mae, including Fannie Mae’s exemption from the registration requirements of the Securities and Exchange Commission (“SEC”) and from state and local taxes.
- NewCo would not be subject to affordable housing goals or other mission requirements currently required of Fannie Mae under the Charter and, as a fully private entity, would not have a prudential regulator acting as a primary supervisor.
- NewCo may make changes to Multifamily’s loan pricing, secondary market execution model, customer targeting and expense structure to the extent necessary to attract capital in light of its loss of the federal guarantee and other Charter benefits, but would preserve as much of Multifamily’s current model as is practicable for a stand-alone entity funded with private capital.

Using these parameters to guide our analysis, we have explored how Multifamily’s business model would change if it were conducted through NewCo, a stand-alone, privately funded entity. We begin the discussion of our analysis by considering some of the mechanics of separation from Fannie Mae. We then move on to look at the capitalization levels that debt and equity investors in NewCo are likely to require. In doing so, we first identify companies in the market today that are comparable to NewCo and then explore the similarities and differences between their business models and NewCo’s business model. We examine how NewCo as a stand-alone entity would fund itself in the debt markets and the implications of the loss of the government guarantee on Multifamily’s securitization model, both in terms of the additional cost to the underlying borrowers and the loss of flexibility to our Delegated Underwriting and Servicing (“DUS®”) lenders and other customers. After accounting for likely changes in required capitalization and expected funding costs, we look at the impact of the new operating model on the profitability of Multifamily’s existing loan products and calculate the increase in loan yields that would be required for these products to meet their assumed minimum return requirements.

To determine the impact on market share and product mix of moving the Multifamily business to NewCo, we made high level assumptions about how competing

providers such as banks, insurance companies and bank-owned commercial mortgage-backed securities ("CMBS") conduits would price the same products. Based on our understanding of industry underwriting standards, we made reasonable assumptions about where banks and insurers would choose to compete. We then incorporated our assumptions for capital requirements, funding costs, loan pricing and market share to create a base case set of financial projections for NewCo. This allowed us to estimate how much of NewCo's total capital needs can be sourced from retained earnings and how much needs to be raised from investors.

Finally, we share our initial assessment of how NewCo would raise the required capital. Key elements of this assessment include a discussion of different ways to access equity capital (e.g., public markets or financial sponsors), precedent transactions, and comparable company valuations. We also compare the cost of raising traditional equity capital to the cost of alternative forms of risk transfer in the securitization and reinsurance markets. The results of this assessment help substantiate the assumptions we have made in our financial projections with respect to required return.

B. General observations on capitalization

Multifamily's existing model resembles that of a mortgage or bond insurer in that both guarantee assets held and financed by others. This would not be the case for NewCo. Given the expected risk profile and capitalization of NewCo as a stand-alone, privately funded and unregulated entity, it would be unrealistic to expect investors to accept the counterparty risk inherent in NewCo's unfunded guarantee. Instead, NewCo would need to hold loans on its own balance sheet and raise significant levels of debt financing. In other words, NewCo would use the model employed by specialty finance companies.

Few specialty finance companies survived the recent financial crisis as independent entities, and the ones that did so tended to have relatively small balance sheets. The larger specialty finance companies that survived the crisis generally did so by becoming bank holding companies subject to Federal Reserve regulation and with access to deposit funding. While there are substantial differences among these independent specialty finance companies, they share certain key traits that distinguish them from regulated banks and insurance companies. In general, they operate with much higher capital levels and with less debt leverage. They also typically have lower debt ratings and higher costs of capital in the debt markets than regulated banks and insurance companies. And because they pay more for capital and cannot compete on pricing, specialty finance and similar companies tend to focus on assets that banks cannot finance more efficiently or that have higher risk profiles than banks (or their regulators) are willing to underwrite.

While it may appear that the more conservative capital structures and higher costs of capital of specialty finance companies simply reflect lower asset quality and higher credit risk, this confuses cause and effect. The reliance of these companies on

less reliable and more expensive funding – specifically, their lack of access to FDIC[1] insured deposits or other stable funding sources – makes liquidity risk their central challenge. Investors in these companies seek to protect themselves from liquidity risk by insisting on higher capital levels and demanding higher returns on their debt and equity, irrespective of perceived credit risk. With a higher cost of capital, these companies turn to higher return – and therefore higher risk – assets as the only plausible way to compete and earn a profit. While lower asset quality may add further to the risk premium investors demand, these additional costs can be passed through to weaker credit customers who lack ready access to alternative funding sources.

In short, a specialty finance company competing for the same high quality assets as banks, and employing a similarly high level of leverage – as Newco would need to do to maintain the business Multifamily engages in today – would be an outlier in the industry, and is not likely to be viable in terms of its ability to attract capital from equity investors or to gain the support of rating agencies and the debt markets. This may be especially true for NewCo, given its lack of product diversity – its "monoline" nature – and the high degree of political risk investors will likely associate with housing-related activities in the aftermath of the financial crisis. NewCo, with its comparatively high cost of capital, would almost certainly be forced to sacrifice one of the hallmarks of Multifamily's historical model – conservative underwriting and superior credit performance.

In light of the prominent role securitization plays in both Fannie Mae and Freddie Mac's current multifamily business models, we also looked at the subordinate CMBS market as a potential source of capital for NewCo. Even if Newco were able to operate with greater effective leverage than traditional finance companies by placing subordinate bonds in the CMBS market, and could thereby target higher credit quality assets, it would still face more onerous capital requirements than other players in the market because it would not have all of the funding and liquidity advantages available to banks (through access to insured deposits or other more stable funding sources, for example). In a competitive market, the best quality loans will still go to banks and other lower cost providers even if those lenders choose to fund a portion of their volumes in the CMBS market. Because it cannot effectively compete with banks and other lower cost providers, NewCo would need to target loans that are less attractive to these providers, including those that are time-consuming to originate and close, or that require specialized skills, such as loans for projects focused on lower income renters or located in underserved markets. Even these loans may be aggressively pursued by banks and other lower cost providers seeking, for example, to meet Community Reinvestment Act (CRA) requirements. Inevitably, many of NewCo's loans would therefore be those that fall outside bank underwriting guidelines due to higher loan-to-value ratios, lower debt service coverage ratios, or other underwriting issues.

While Newco may access the subordinate CMBS market to the extent it offers a more attractive cost of capital than holding a given loan on balance sheet, NewCo would be one player among many competing for the same lending volumes and is

[1] Federal Deposit Insurance Corporation

unlikely to have any natural pricing advantage over other competing CMBS issuers. Moreover, if NewCo were unable to sell subordinate tranches in the CMBS market (e.g., due to investor discomfort with a monoline issuer or adverse changes in market conditions), NewCo would need to retain these subordinate classes on balance sheet. In such event, the private label CMBS market would act solely as a source of senior debt financing for NewCo and there would be no practical difference for NewCo between the securitization conduit and specialty finance company models in terms of potential leverage or the cost of capital. Rating agencies and CMBS investors may in fact require more from the monoline NewCo than from other conduit players (particularly bank-sponsored conduits), including higher dedicated capital reserves to cover representations and warranties, more conservative CMBS subordination levels, and wider bond pricing. Such requirements would further undermine NewCo's ability to successfully compete with bank-owned conduits and other large financial institutions.

The recent credit crisis has heightened awareness of the risk posed by interruptions in CMBS market funding, and equity investors are unlikely to assume that this market will always be available, either in general, or to NewCo specifically. Instead investors likely will analyze NewCo's capital needs and potential returns primarily on the basis of loans being held on balance sheet. While NewCo might at times be able to sell credit risk at attractive pricing in the subordinate CMBS market, NewCo cannot plan to rely on this market as its sole source of capital and would therefore need to maintain a stock of traditional corporate equity raised from shareholders. NewCo's viability, in turn, would depend on its ability to provide these equity investors with adequate returns even if the CMBS market is closed and loans must be held on balance sheet.

Given the competitive disadvantages NewCo would face relative to banks and insurance companies with access to more stable, often government-guaranteed, funding sources and more diversified business models, we considered the alternative strategy of selling the Multifamily business to a bank or having NewCo obtain a banking license. However, even under the significantly reduced market share assumptions we are making for NewCo, our analysis shows NewCo's balance sheet would grow to over $50 billion in multifamily loans within seven years – and there are very few banks large enough to take on $50 billion or more of incremental assets in a single loan category. (The largest existing bank multifamily portfolios are J.P. Morgan with $37 billion, New York Community Bank with $18 billion and Wells Fargo with $11 billion – portfolio sizes decline steeply from that point)[2]. Also, any of the banks with the scale necessary to take on even a reduced Multifamily business are already deemed "systemically important financial institutions" (SIFIs)[3] by the bank regulators. Regulators may not allow these "too big to fail" entities to grow larger through acquisition, nor is it clear that bank regulators would grant a banking license to a new monoline specialty finance company or allow it to raise any meaningful level of FDIC insured deposits. For these reasons, we rejected the bank model as a plausible base case for considering NewCo's viability.

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[2] Banks regulatory filings; Schedule HC-C.

[3] A systemically important financial institution, or SIFI, is any firm, designated as such by the U.S. Federal Reserve, whose failure would pose a serious risk to the wider economy and financial system.

In light of recent entrance into the market of a number of newly created real estate investment trusts (“REITs”) raising capital to invest in loans and securities similar to those Multifamily originates today, we also looked at the possibility of NewCo operating as a REIT. As a stand-alone entity that retains and manages credit risk over the life of its loans, NewCo’s income would likely be REIT-qualifying under the Internal Revenue Code, and a REIT election for qualifying earnings would have the obvious appeal of providing higher returns for shareholders and possibly allowing NewCo to price loans more competitively. The REIT market also attracts yield-oriented (as opposed to growth-oriented) equity investors willing to fund mortgage assets. Nonetheless, we concluded that a REIT structure is not the right base case model for answering the question of viability.

Under the tax code, REITs must pay out at least 90% of their earnings to shareholders. Portfolio growth must therefore be funded largely by continually raising new equity. To the extent yields demanded by new investors increase (e.g., if interest rates rise significantly), the new capital would be dilutive to existing shareholders. This has led some companies to defer raising new capital and to turn instead to additional leverage to fund growth. The consequences of those decisions have often been quite destructive, but the alternative is to refrain from originating new loans or to lock in dilution for current owners. Because holding assets and capital outside of a REIT allows more flexibility to respond to changing markets and carries less dilution risk for initial capital providers, we have focused on a taxable specialty finance company model rather than a REIT as the base case scenario for assessing NewCo’s viability.

C. Results of viability analysis

In response to FHFA’s direction, we have explored the question of the potential viability of Fannie Mae’s Multifamily business operating on a stand-alone basis without a government guarantee. We have concluded that NewCo could potentially raise start-up equity capital in the private markets as a stand-alone, unregulated specialty finance company, but our analysis suggests that the resulting company would be very different from Multifamily as it exists today and that its long-term survival would be uncertain.

NewCo’s value proposition for investors would derive from Multifamily’s extensive network of existing originator relationships; the Multifamily team’s cumulative expertise in underwriting loans, managing risk and accessing the secondary market; and Multifamily’s ability to identify market niches where NewCo could price loans competitively. Based on our assessment of relative cost and execution certainty, NewCo would likely raise equity through one or more offerings to public market investors (the “IPO”) which it would supplement over time with retained earnings. NewCo would expect to raise any required debt financing primarily in the private label CMBS market, but could also utilize the warehouse, repurchase and unsecured debt markets if and when such sources were more appropriate. Though liquidity in the private label CMBS market has improved since the depths of the crisis, and spreads on CMBS (the additional required yield over comparable Treasury securities) have

tightened, investors are still likely to require a material premium for this financing relative to what they currently demand for Fannie Mae-guaranteed MBS.

As discussed above, investors in NewCo are likely to base their assessment of NewCo's business model and their valuation of NewCo's shares on the performance of comparable companies trading in the public markets. This implies equity capital requirements for NewCo of at least 10% of assets. Moreover, in order to achieve a minimum valuation of at least 100% of book value, NewCo's financial model would need to deliver minimum returns on equity of between 10% and 15% per annum. Our analysis, therefore, assumes 10% and 12% respectively for Newco's equity capital and return on equity requirements. We view these assumptions as a "best case" and both could be higher in practice.

It is unlikely that the sale of shares in NewCo would generate a premium valuation given its risk profile, expected profitability and growth prospects. In addition, Fannie Mae under conservatorship does not have any common equity on its balance sheet. As a result, any common equity capital required by NewCo would need to be raised from investors, and Fannie Mae would need to sell nearly 100% of its ownership interest in NewCo to support an IPO valuation of 100% of book value. Fannie Mae would therefore be unable to capture any tangible value from the sale of the business apart from a gradual reduction in its future credit exposure to the multifamily market. In other words, a sale of NewCo would not return to Fannie Mae, or the taxpayer, any part of the substantial franchise value of Multifamily as it exists today. To put this in context, Multifamily generates more than $1 billion annually in pre-tax earnings, inclusive of earnings from the Legacy Book.

To cover the cost of debt financing while achieving targeted returns on its assumed capital requirements, NewCo would need to raise the yield on loans currently made by Multifamily by as much as 110 to 190 basis points depending on the product.[4] Many of Multifamily's existing borrowers could obtain more attractive pricing from insurance companies, banks and the bank-owned CMBS conduits. As a result, we project that NewCo would retain at best only 15% to 25% of Multifamily's existing market share, producing a future balance sheet of approximately $50 billion of assets after nine years of operations. To fund this reduced volume, NewCo would need to raise approximately $3.5 billion of equity in one or more public offerings with the remainder of its capital requirements provided by retained earnings.

NewCo's loan volume would likely be concentrated in categories not generally well served by banks and insurance companies. The first category includes lending sectors such as smaller balance loans outside of the major metropolitan markets and niche products such as subsidized affordable housing, seniors housing, student housing and manufactured homes. These products require specialized underwriting expertise and offer fewer synergies with other business lines. As such, they are generally not

[4] A "basis point" is 1/100th of 1%, so raising yields by "110 to 190 basis points" means that interest rates on NewCo's loans and MBS would increase by 1.10% to 1.90% over today's Multifamily rates.

attractive to bank lenders, making them relatively less competitive. The second category includes loans with characteristics such as higher loan-to-value ratios or lower debt service coverage ratios that fall outside banks' typical underwriting criteria. NewCo might also find additional volume in higher credit quality borrowers looking for greater flexibility with respect to loan proceeds, loan maturity, availability of interest-only terms, ability to obtain fixed interest rates over the life of the loan or other features offered by the CMBS market but less often by banks. NewCo's competitiveness in this segment would depend on its CMBS market execution and its effective capital requirements relative to bank-owned CMBS conduits.

NewCo would seek to retain Multifamily's DUS model, with its alignment of incentives among the parties, to ensure continued high quality underwriting and servicing practices. The shift to a stand-alone entity, however, would likely force changes in the DUS program as well as in the composition of the DUS lender base. In the absence of a government guarantee and with the loss of Fannie Mae's exemption from the registration requirements of the Securities and Exchange Commission ("SEC"), NewCo would be unable to offer customers the flexibility of the single-asset securitization model but instead would need to aggregate loans for ultimate sale in a REMIC[5]-style CMBS offering. Depending on the exact nature of its capital requirements, NewCo might also need to change the loss sharing structure Multifamily currently employs with its DUS lender partners. As a result of these changes, NewCo would likely lose those of its lender customers that are affiliates of major financial institutions as they would have access to more attractive financing through their parent companies. NewCo would seek to retain Multifamily's remaining lender customers – the small independent originators – but changes in NewCo's business model would likely place significant pressure on the business models of these lenders. NewCo could also seek new lender customers that specialize in product niches where NewCo would face less competition than it likely would with Multifamily's current range of products.

As mentioned above, for the limited purposes of responding to the FHFA Scorecard directive, "viability" is defined as NewCo's ability to initially raise private capital to fund some portion of Multifamily's existing business. To say that NewCo is viable in this sense does not mean we also believe it can remain viable over the long term. Consistent with their higher cost of capital, investors consider specialty finance companies and securitization conduits to be more speculative business models. Specialty finance companies often failed even prior to the recent financial crisis and a large number of them failed, or withdrew from the market, during the crisis. Historically, securitization conduit models have not fared any better, with many closing down during the 1998 debt crisis and many more during the most recent crisis. The main threat to NewCo's viability is not that credit losses will drive the company to the point of insolvency. The main threat is that, well before insolvency, creditors will cut off new funding to NewCo due to concerns about liquidity, with the resulting cash shortfall quickly leading the company to fail. In short, Newco's long-term viability would be contingent on the continued stability of the financial markets and would be vulnerable to

[5] "REMIC" means a Real Estate Mortgage Investments Conduit as defined in the Internal Revenue Code.

future market dislocations, even those far less severe than the dislocation experienced during the recent crisis.

D. Risks and dependencies of the analysis

In undertaking our analysis of the viability of the Multifamily business operating as a stand-alone entity in the absence of government support, we engaged Credit Suisse and McKinsey & Company to provide the analytics and modeling necessary to assess viability. We directed these advisors to focus their efforts on "viability" as narrowly and specifically defined by FHFA. Importantly, we asked them to ground their analysis in defensible market assumptions but, consistent with that requirement, to view viability in a favorable light rather than choosing the more conservative assumption in a range of possible outcomes.

Our analysis assumes a nine-year market cycle consisting of six normal years and three stressed years. We view the use of an explicit market cycle as vital to meaningfully depict the risks faced by an entity such as NewCo. Our base case assumes that the CMBS markets would be open at all times, that credit losses would be moderate in the six normal years of the cycle, and that the three stressed years would reflect the down phase of a typical business cycle and not the type of catastrophic dislocation recently experienced in the markets. We have made numerous other assumptions throughout, all plausible but geared to the more optimistic view. Our conclusion regarding the potential viability of NewCo – even limited as it is to FHFA's narrow definition of "viability" – requires that all or virtually all of these optimistic assumptions be realized. NewCo's viability could be threatened by any one or more of the following events or circumstances should our assumptions prove too optimistic:

- The ability to raise as much as $3.5 billion for NewCo is certainly possible, but success is far from certain, particularly for a speculative venture such as NewCo. Investors consider specialty finance companies and securitization conduits to be risky business models, requiring higher levels and costs of capital. The short history of the securitization conduit industry supports this view, with many conduits losing considerable amounts of money or closing down altogether in the debt crisis of 1998 and then again during the recent crisis.

- In our base case, NewCo relies heavily on raising debt funding in the private label CMBS market, and debt comprises 90% of its capital structure. If the CMBS market suffers from another disruption, access to these funds could become much more expensive, and may not be available at all. Although alternative sources of debt may be available, such debt would likely be more expensive than projected, harder to acquire, and shorter in duration (and thus more subject to being called by NewCo's lenders).

- We assume that NewCo would need to raise only 10% of its required capital as equity and that investors would require only a 12% return on that equity. In reality, many specialty finance companies are capitalized at 15% or more in terms of equity-to-assets. In addition, due to the size and risk of the NewCo

venture, investors may balk at the relatively low return of 12%, particularly when they can arguably get a similar return from less risky investments. Increasing either the amount or the cost of NewCo's equity would increase NewCo's cost of doing business, resulting in higher interest rates to borrowers. Higher rates generally mean lower volume and reduced market share. At some point, NewCo would simply become uncompetitive for any segment of the market.

- We have assumed that NewCo would maintain a 5.5% market share in a normal market, an optimistic assumption given NewCo's role as a high-cost, niche lender. NewCo's potential competitive advantage, its inheritance of the DUS business model and its DUS lenders, would be blunted by, among other things, NewCo's higher cost of funds and potential lender attrition. Multifamily's current staff is not accustomed to higher risk lending, so the transition could be challenging, and success cannot be assured. In addition, the interest rates NewCo must charge to remain viable may turn out to be too high to attract that level of volume. It would therefore be challenging, even under the best conditions, for NewCo to retain a base case 5.5% market share while competing against major banks, life insurance companies and bank-owned securitization conduits.

- In contrast, we have assumed NewCo's market share would fall by half to 2.75% in a stressed environment, when the higher assumed cost of funding and level of credit losses would make adding new loans less attractive. If NewCo were unable to reduce originations – for example, if existing borrowers could not obtain alternative financing – NewCo's portfolio balance would be higher than we are assuming. This would put greater pressure on NewCo's capital ratios and access to funding, and would increase the risk of a liquidity crisis.

- Although NewCo is assumed to incur a cyclical average of 50 basis points in credit losses per year - a level considerably higher than Multifamily's historical average, NewCo's loans would likely be much riskier than those in the Legacy Book and consequently losses could be higher, and perhaps considerably higher, than what has been assumed.

- Newco's long-term viability would be highly dependent on the continued recovery and future stability of the financial markets. In our projections, we assume a market downturn where NewCo's funding costs increase by 300 basis points and credit losses are approximately four times the base case rate. Even though the assumed downturn is far less severe than that experienced during the recent crisis, NewCo's capital levels would drop below the assumed 10% target, bottoming near 4%. If NewCo were unable to reduce its market share during the downturn, a larger balance sheet would push its capital levels to 3%.

- A drop to 4% or 3% equity-to-assets would not be fatal on its own. But the demise of a financial institution does not require actual insolvency (having zero or negative capital); the mere specter of insolvency is often enough. Well before

actual insolvency is reached, creditors could cut off any new debt or equity funding to NewCo, creating a liquidity crisis - a shortfall of cash - that could quickly lead to financial failure.

- NewCo is assumed to manage Multifamily's approximately $200 billion asset Legacy Book for five basis points per annum or $100 million in the first year. This income would be a significant component of NewCo's total earnings, particularly in the early years when NewCo's loan book is still relatively small and growing. Without this income, NewCo would be less profitable and might need to further cut expenses.

- NewCo's separation from Multifamily has been carefully studied, but the cost and complexity of the separation could prove to be greater than anticipated, resulting in higher separation costs and possible business interruptions.

E. Consequences beyond NewCo

The transfer of the Multifamily business to NewCo would have significant consequences for Multifamily's customers and for the broader markets. The existing Multifamily model offers market access to a range of independent originators. But these customers would face significant pressure: with the loss of a guaranteed secondary market execution, much of their own customer business would likely shift to banks, insurance companies and other providers as these borrowers sought more attractive pricing and more flexible structuring options than NewCo could provide. These other lenders would have their own origination staffs and would have no need for the services of Multifamily's DUS and other independent lenders. The resulting reduction in volumes would put pressure on the cost structures of independent lenders. Ultimately, the multifamily origination market would likely become more concentrated among the largest banks, as is currently the case with the single-family origination market. In short, Multifamily's current role as a provider of secondary market liquidity to multiple independent originators is a function of its access to a government guarantee, as well as the mandates and restrictions imposed by the Charter. The loss of the guarantee and the need to meet the capital requirements demanded by private investors would likely force changes in the DUS program and the partnership Multifamily has enjoyed with its lenders. At the extreme, Newco might find it more efficient to originate loans directly on its own behalf.

We have already noted that NewCo would likely need to increase current Multifamily pricing by approximately 110 to 190 basis points (depending on product) to remain profitable as a stand-alone entity. While banks and other lenders would be able to capture a significant portion of Multifamily's current market share through lower pricing, these providers would still likely charge significantly more than Multifamily's borrowers currently pay for funding through Fannie Mae. Loan yields on even the highest credit quality loans could increase by as much as 35 basis points relative to Fannie Mae's current pricing. And while paying more, these borrowers may also be getting a less desirable loan, as banks tend to offer shorter loan maturities,

necessitating more frequent refinancing and higher "balloon" risk[6] for both the borrower and lender.

In addition to a higher base case cost of financing, borrowers would be subject to much greater variation in the cost and availability of credit through market cycles without the stabilizing role of a government-guaranteed funding source. The more frequent need to refinance short-term bank-originated loans would exacerbate this volatility. Higher base case funding costs and greater volatility in the cost and availability of financing would likely put downward pressure on real estate prices and therefore on credit performance. In addition, the higher base line costs and greater risks imposed on owners of multifamily real estate would inevitably translate into higher rents being charged to tenants, with a disproportionate impact likely on low- and moderate-income families and on renters outside of large coastal markets. In particular, borrowers who currently benefit from Fannie Mae's mission-related affordable housing programs may see dramatically higher financing costs or lose access to private financing altogether. This would result in greater regional disparities in the availability of credit, with the bulk of more affordable bank and insurance company lending focused in large cities and coastal markets. Those borrowers who lose access to private market credit would need to rely solely on financing from the Federal Housing Administration ("FHA"), if available.

F. Concluding remarks

In summary, NewCo, as a stand-alone multifamily business operating without a guarantee, might be able to raise private capital at the outset and, on that narrow measure, could be considered "viable" as defined for purposes of the analysis. But NewCo would be a dramatically smaller entity than Multifamily, operating as a high cost provider lending to niche sectors in a market where the largest banks and other balance sheet lenders would play a far more significant role than they do at present. And NewCo's survival through time is not assured. Businesses of this sort can and do fail – and those that survive often do so by severely curtailing their lending activities during periods of market fragility. So, while NewCo could perhaps preserve the core of Multifamily's current business model, customer relationships, personnel and infrastructure in the near term, it could do so only by making changes to the existing Multifamily model that would prove disruptive to the multifamily market.

To elaborate further on this point, if Fannie Mae's Multifamily business were replaced with NewCo, the real estate finance market would lose a consistent provider of stabilizing liquidity (about $20 to $25 billion in financing annually) and would gain instead a specialty finance company providing at best $6 billion annually (on average over the cycle), with even that estimate assuming a number of conditions that NewCo may be unable to meet. Borrowers would face higher borrowing costs and more variability in the price and availability of credit, with the greatest adverse impact likely to fall on low- and moderate-income families and renters in underserved markets. Some borrowers could lose access to credit altogether. Higher expected funding costs and increased uncertainty about the ability to refinance existing loans would likely translate

[6] Balloon risk is the risk that a loan cannot be refinanced at maturity.

over time into lower real estate prices, higher default rates and higher rents for consumers. The future of the DUS model, and the financial viability of certain DUS lenders, would be compromised, perhaps beyond repair. In other words, while we might be able to move to a fully private market for multifamily lending, the market would have to tolerate higher pricing and greater cyclical market disruptions that would potentially damage both customers and markets currently served by Multifamily.

In concluding these introductory remarks, it is vital to emphasize that the analysis that follows does not represent the full range of Fannie Mae's thinking on the future of the multifamily market. We were asked to analyze a specific question, and that is the work we present below. But we strongly believe there is a range of options between the extremes of the current status quo and a fully privatized market for multifamily lending. In particular, we believe the availability of a limited government guarantee on multifamily MBS, fully paid for by well-capitalized MBS issuers, provides a host of advantages. By protecting MBS investors from catastrophic credit losses, the guarantee would remove the self-reinforcing liquidity fears that drive higher funding costs and higher capitalization requirements, and would thereby allow lower interest rates to borrowers. At the same time, higher capital levels held by MBS issuers would protect taxpayers from the risk of loss and allow a more level playing field among different lenders. To the extent that taxpayers still faced any residual risk of losses, they would be paid an appropriate return for taking that risk (in a manner similar to how the FDIC is paid by banks). In the context of a guarantee, regulators would have the ability to promote more uniform access to credit across geographies and within communities. Such a structure addresses the main concerns raised by critics of the status quo, without risking the potential disruption to markets and communities that a fully-privatized multifamily market would likely entail.

II. OVERVIEW OF THE MULTIFAMILY HOUSING SECTOR

A. Market size and composition

Multifamily housing includes apartment buildings, condominiums, cooperatives and other rental properties with five or more individual dwelling units. This definition embraces a wide variety of housing options, ranging from suburban garden apartments to large urban housing complexes, and includes specialized housing options for seniors, students and military personnel. Approximately 14% of U.S. households (17 million out of 119 million in total) lived in multifamily housing at the end of 2011.[7]

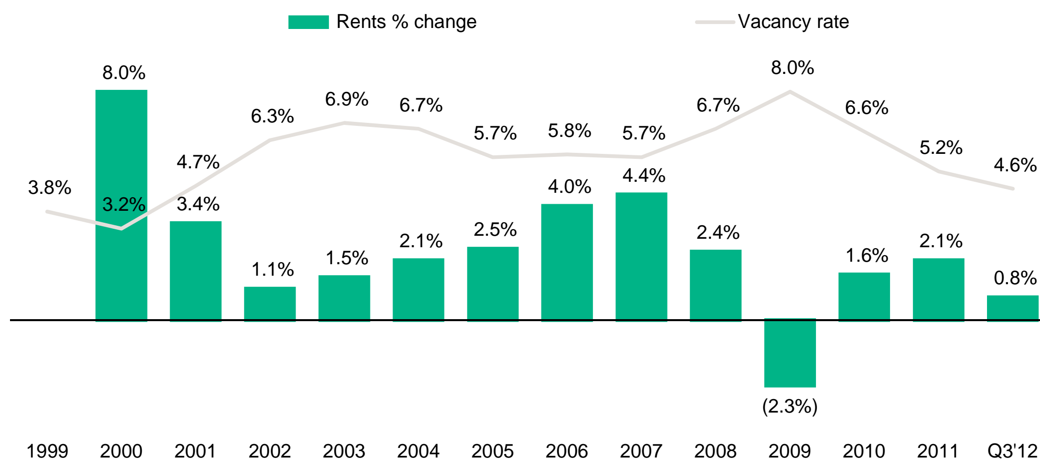
Multifamily units tend to be smaller and less costly than single-family homes. As a result, according to a 2009 housing survey, the vast majority of these units (in this case 91.4%, or 13.9 million out of the then 15.2 million occupied housing units[8]) are considered to be affordable to households earning 100% or less of the area median

[7] NMHC tabulations of 2011 Current Population Survey, Annual Social and Economic Supplement US Census Bureau. Updated September 2011.
[8] 2009 American Housing Survey, U.S. Department of Housing and Urban Development.

income (“AMI”) for their location, meaning that the rental payments for these households consume no more than 30% of household income. Indeed, according to another survey done in 2010, nearly 85% of all occupied multifamily rental units, approximately 13 million units, are affordable to households earning 80% or less of the area’s median income.[9] As these numbers suggest, the multifamily market segment serves a critical role in providing housing to a wide range of less affluent Americans, including working-class families, the young (including students) and the growing senior population.

Despite the multifamily housing market’s critical role in meeting the needs of consumers, affordable rental housing is in increasingly short supply. As a result, vacancy rates have fallen and rents have increased (Figure 1).

Figure 1: Vacancies and Rents

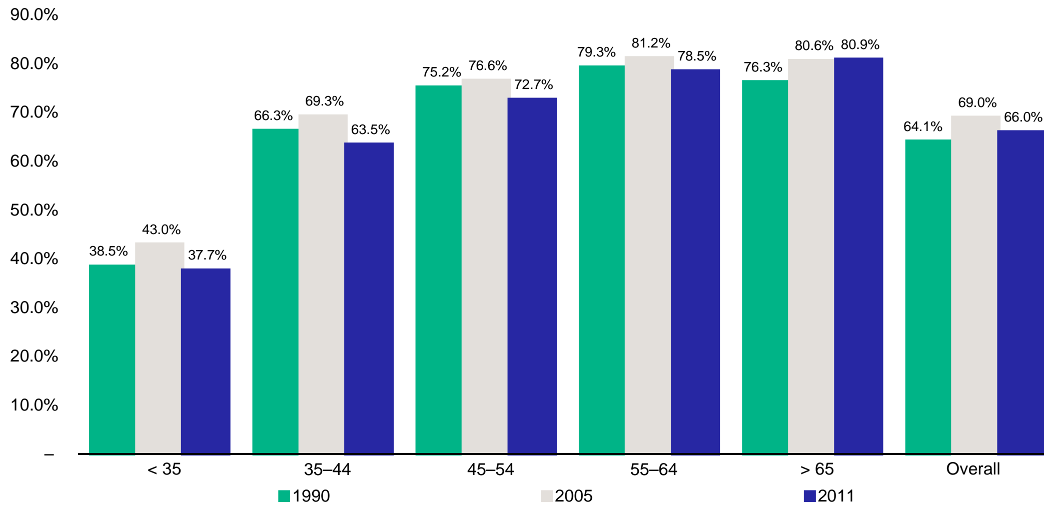


Source: REIS database
Note: Data is based on vacancies and asking rents for 20+ unit properties in 79 major metropolitan markets.

The growing shortfall in affordable rental housing is a function of changes in both supply and demand. The recession and associated foreclosure crisis have led to large declines in homeownership rates, particularly among younger members of the population (Figure 2). Much of this decline may ultimately be structural, given the more conservative underwriting standards and higher down payments now required for single-family mortgages. In addition, the widely publicized inability of unemployed, “underwater” homeowners to relocate in search of jobs may permanently reduce the attractiveness of owning a home for young people entering the housing market.

[9] Harvard Joint Center for Housing Studies, 2010 State of the Nation’s Housing.

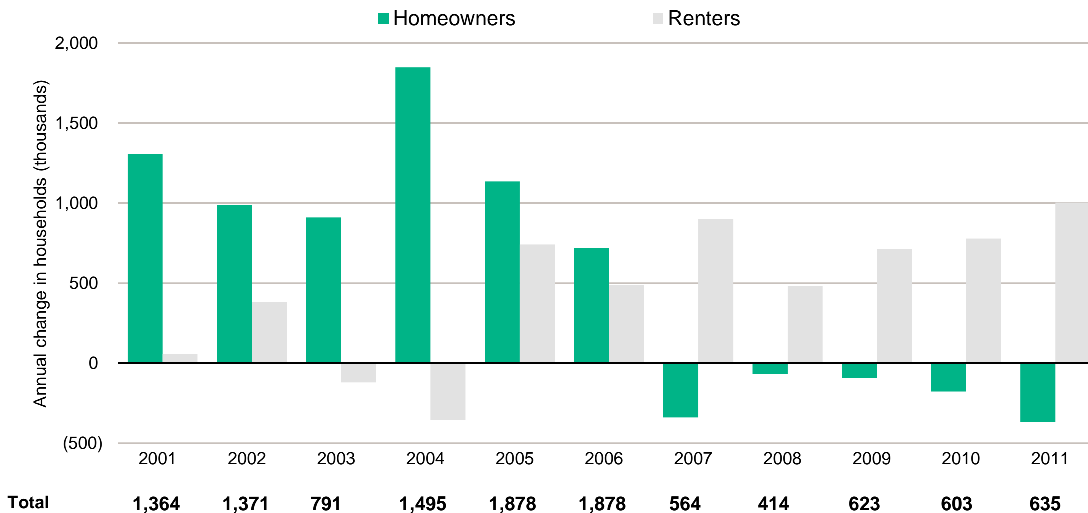
Figure 2: Homeownership Rates (Seasonally Adjusted)



Source: U.S. Census Bureau, Housing Vacancies and Homeownership.

While the decline in homeownership has already resulted in increased demand for rental housing, there will likely be significant further increases in demand over the next few years. Household formation rates have fallen since the crisis as young people and former homeowners have held off forming new households or been forced to "double up" with parents, other relatives or friends (Figure 3). A recovering economy and rising employment will allow these people to establish, or re-establish, their own residences. For the reasons mentioned above, a higher share of this demand is likely to be for rental housing than it was before the crisis.

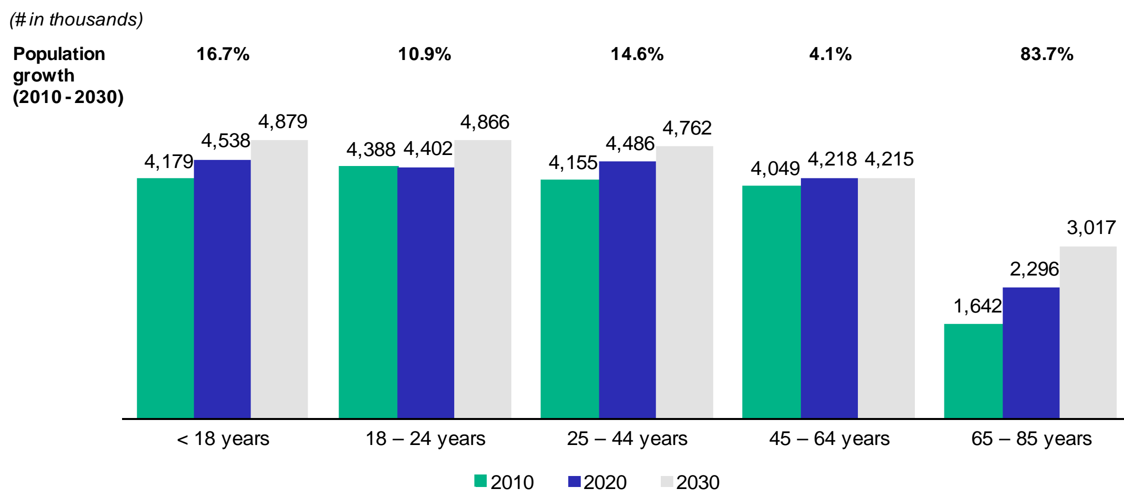
Figure 3: Net Household Formation



Source: JCHS tabulations of U.S. Census Bureau, Housing Vacancy Surveys.

This incremental demand will augment the organic growth that will occur as the large, currently underage and more-apt-to-rent "Echo Boom" generation establishes independent households over the next 20 years (Figure 4).

Figure 4: Average Population per Year of Age (By Age Group)

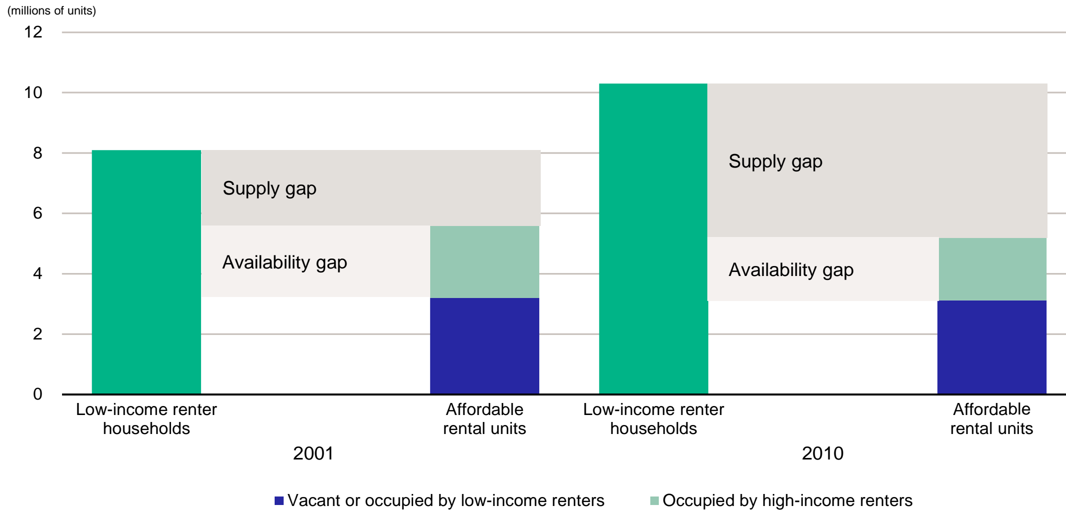


Source: U.S. Census Bureau.

Seniors represent another potential source of new demand. As shown in Figure 2 above, seniors have historically had among the highest levels of home ownership of any age group, and that rate has increased in recent years. At least some of that increase may be attributable to seniors being unable to sell their homes at a price that would enable them to move to more age-appropriate housing. While older homeowners may choose to "age in place" and remain in their family homes, even a modest increase in the percentage that elect to move to rental housing would drive a significant increase in demand from this segment of the population. This will be an increasingly important factor given the rapid growth in this segment of the population (Figure 4).

Even as the demand for affordable rentals has risen, the supply has fallen due to rising rents on existing units, conversion of properties to condominium, coop or other uses, and outright demolitions. In addition, much of the supply that would be considered affordable to lower income borrowers is actually occupied by higher income households, further reducing the available supply. These trends are summarized in the most recent Harvard Joint Center for Housing Studies report, "The State of the Nation's Housing 2012." Using data from the Census Bureau, the Harvard Joint Center calculates that the gap between demand and available supply of affordable rental housing has grown from 2.2 million units to 5.1 million over the last decade (Figure 5).

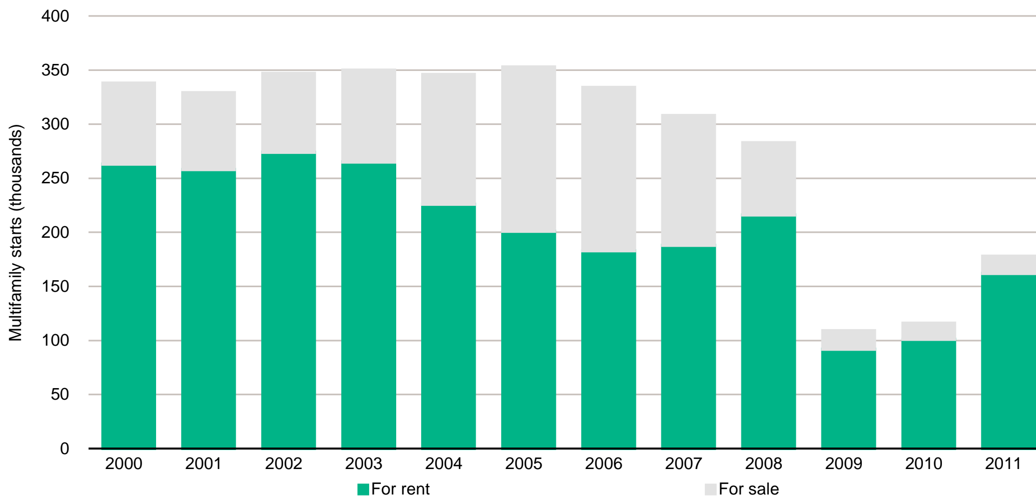
Figure 5: Affordable Housing – Imbalance Between Supply and Demand



Source: JCHS tabulations of U.S. Census Bureau, American Community Surveys.
Note: Low-income renters have annual incomes of $15,000 or less. Affordable units have rents under $377 per month (30 percent of monthly household income). Adequate units have complete kitchen and plumbing facilities. Household income and rent are in constant 2010 dollars, adjusted for inflation by the CPI-U for All Items.

In response to increased demand and rising rents, the pace of multifamily construction has increased from the low levels seen during the recent financial crisis. However, new rental construction has still not reached the levels seen prior to the crisis (Figure 6). Indeed, current construction levels do not greatly exceed the pace at which existing units become obsolete and are certainly not keeping pace with the increased demand from new rental households. New construction also tends to be concentrated in higher-end projects charging higher rents. The end result of these continuing trends is higher rents, lower vacancies (Figure 1) and an increasing affordability gap (Figure 5).

Figure 6: Multifamily Construction Trends

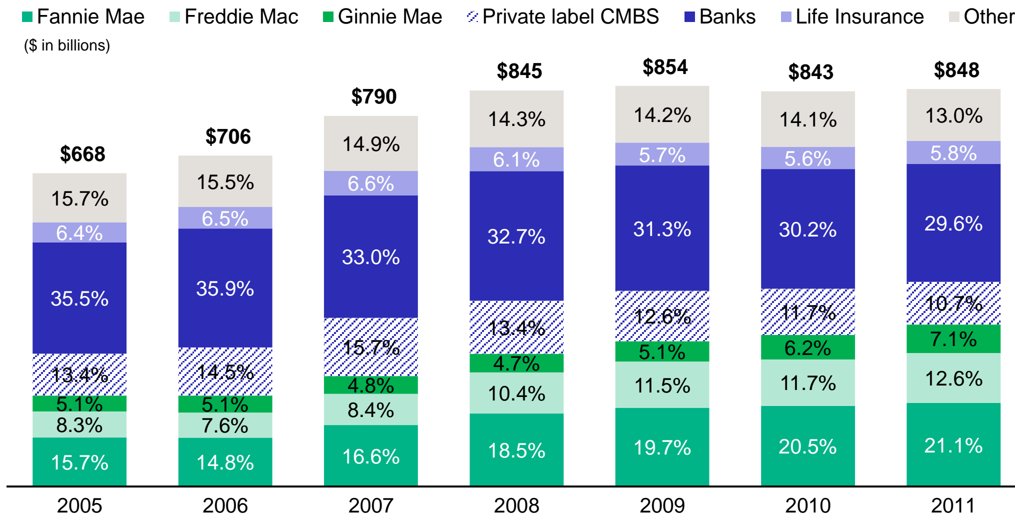


Source: JCHS tabulations of U.S. Census Bureau, American Community Surveys
Note: Multifamily represents buildings with 2 units or more.

B. Multifamily finance market

Owners of multifamily housing units obtain financing from a variety of sources, including the Enterprises, private lenders and directly from investors through the securitization markets (private label CMBS). As of the second quarter of 2012, there was approximately $850 billion in multifamily loans outstanding (Figure 7).

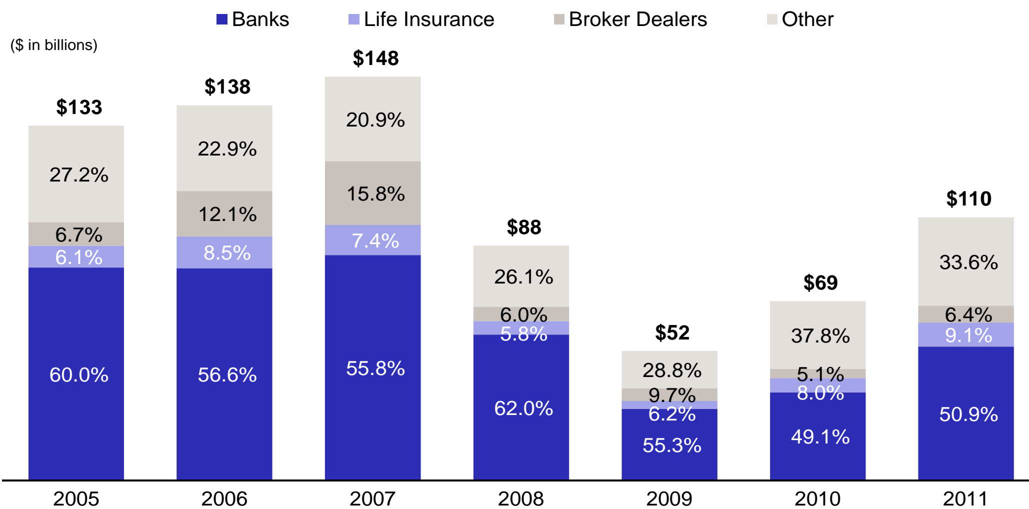
Figure 7: Multifamily Loans Outstanding by Major Holders



Source: Federal Reserve.

According to data from the Mortgage Bankers Association, over $110 billion in new loans were made in 2011 (Figure 8), more than double the amount originated in 2009 but still below pre-crisis norms. The primary originators of multifamily mortgages include large banks, community banks, insurance companies, broker dealers and independent specialty finance companies.

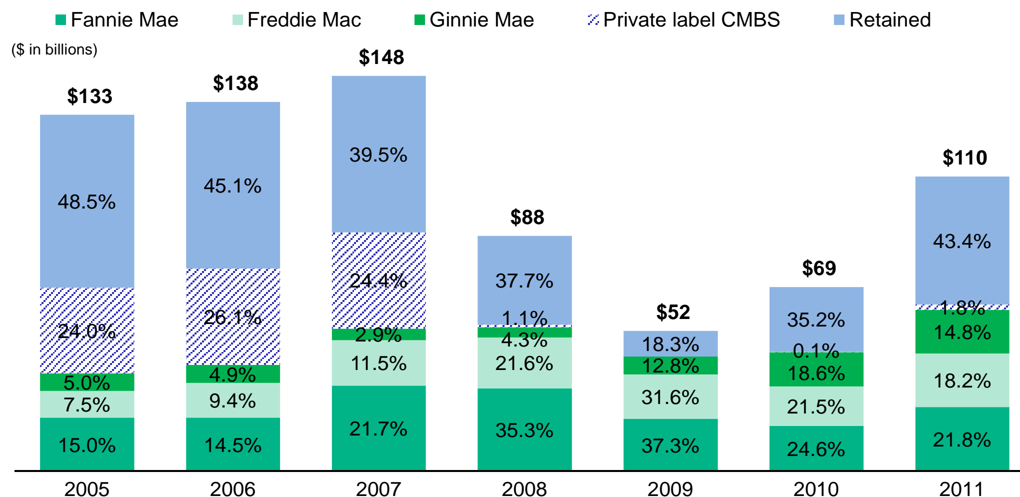
Figure 8: Total Multifamily Originations



Source: Fannie Mae and Mortgage Bankers Association.
Note – The Mortgage Bankers Association publishes data for individual originators and aggregates this data to estimate total originations. This data is based on a combination of Home Mortgage Disclosure Act (HMDA) data for each year as well as the MBA's proprietary survey of its members' lending activity and may not reflect 100% of the origination activity occurring in the market. Fannie Mae has categorized the originators by industry subsector to create the breakdown shown in Figure 8.

A significant portion of annual originations are sold into the secondary market through the Enterprises or through private label CMBS transactions, with the remainder being held mainly on originators' balance sheets (Figure 9). In the aftermath of the crisis, the Enterprises increased their share of total lending as banks and other originators dramatically reduced their originations and redirected their secondary market activity away from the private label CMBS market. While private label CMBS activity remains limited, balance sheet lending has recovered nearly to pre-crisis levels. As the FHFA Strategic Plan notes, notwithstanding the significant Enterprise activity during the crisis, Fannie Mae and Freddie Mac do not play the same dominant role in the multifamily market as they do in the single-family market.

Figure 9: Acquisitions by Secondary Market Participants



Source: Fannie Mae, Freddie Mac, Mortgage Bankers Association and Trepp.
Note: Excludes purchases of loans from others' portfolios.

C. Comparison of multifamily and single-family financing models

The FHFA Strategic Plan correctly observes that multifamily lending is "more akin to other commercial real estate lending than to single-family lending." Multifamily lending features a smaller number of loans, which are larger, more complex, and have more heterogeneous product features than single-family loans. Fannie Mae's average multifamily loan size is $5 million as compared to an average single-family loan size of $150,000.[10] Multifamily loans typically have terms of five, seven or 10 years, with balloon payments due at maturity, as compared to the standard fully-amortizing 30-year term of a single-family residential loan. In addition, single-family loans typically can be prepaid without penalty, while multifamily loans have restrictions on prepayment and impose a fee, or prepayment premium, on borrowers for early repayment of their loans.

The smaller size and relatively more homogeneous nature of single-family loans allow for a more algorithm-driven credit analysis than is appropriate for multifamily lending. The greater complexity of multifamily loans is a function of multifamily borrowers being operating businesses, with loans collateralized by the income-producing properties owned by these businesses, including garden apartments, high-rise urban apartment complexes, seniors housing communities, affordable housing properties that receive federal, state and local subsidies, cooperatives, dedicated student housing, and manufactured housing communities. Multifamily borrowers are typically sophisticated for-profit or non-profit corporations, limited liability companies, partnerships, real estate investment trusts or individuals. For-profit borrowers invest in real estate for cash flow and equity returns in exchange for their original investment in

[10] Fannie Mae's ability to purchase multifamily mortgage loans is not limited by the maximum loan-to-value and loan amount limits placed on its purchase of single-family mortgage loans under the Charter.

the asset; non-profit borrowers typically invest to provide quality, affordable housing, and often other supportive services, to a targeted group of tenants.

Although most multifamily loans are non-recourse to the borrower, a thorough analysis of the borrower's credit and expertise remains critical. When considering a multifamily borrower, creditworthiness and expertise are evaluated through a combination of objective and subjective factors, including analysis of the borrower's liquid assets, net worth, real estate and number of units owned, experience in a market or property type, multifamily portfolio performance, access to additional liquidity, debt maturities, asset and property management platform, senior management experience, reputation, and lender exposure.

III. FANNIE MAE'S EXISTING MULTIFAMILY BUSINESS MODEL

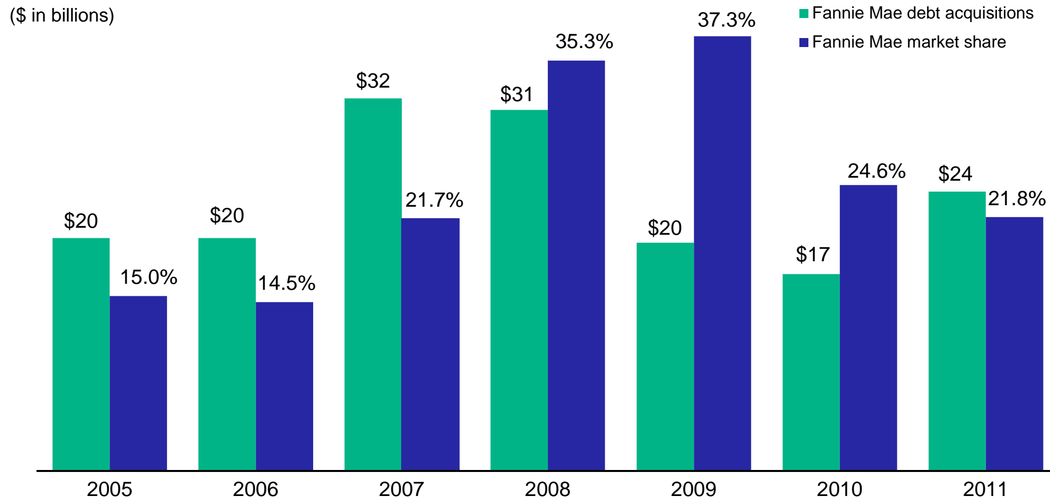
A. Market share trends and target markets

Fannie Mae's participation in the multifamily market began in 1938 when the federal government created a mortgage association to facilitate the construction of economically sound rental and for-sale housing through direct loans secured by first mortgages and insured by FHA. Over time, Fannie Mae's authority to purchase mortgages on multifamily rental housing was broadened to include conventional (i.e., non-FHA insured) financing. In 1984, Fannie Mae created what is now Multifamily, a business division dedicated to purchasing multifamily loans.

In recent years, Fannie Mae has been the largest provider of financing to the overall multifamily mortgage market, with production totaling $15 to $35 billion per annum between 2005 and 2011 (Figure 10). These volumes have represented a market share of between 15% and 40% over that period.[11] During the crisis, both Fannie Mae and Freddie Mac were able to sustain their business volumes even as other lenders withdrew from the market. As a result, the Enterprises became the primary sources of liquidity for the multifamily industry, significantly expanding their combined market share from approximately 25% prior to the crisis to nearly 70% in 2009. As the market has stabilized and private funding sources have returned to the market, the Enterprises' market share has begun to return to pre-crisis levels.

[11] Source: Fannie Mae.

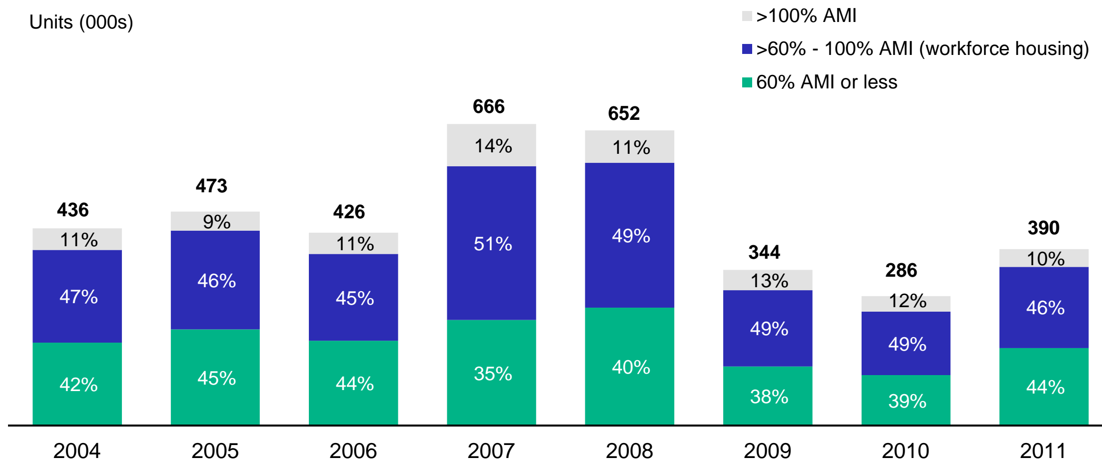
Figure 10: Fannie Mae New Debt Acquisitions and Market Share



Source: Fannie Mae.
Note: Excludes purchases of loans from others' portfolios.

In line with the overall market, Multifamily has consistently generated approximately 90% of its annual multifamily acquisitions from units occupied by those earning less than the local median income (Figure 11). Between 35% and 45% of this volume has been for units affordable to those earning less than 60% of the local median income.

Figure 11: Affordable Units as a Percentage of Multifamily Total Debt Acquisitions



Source: Fannie Mae
Note: Total units include only units eligible for scoring as defined by FHFA.

Multifamily has a dedicated platform focused solely on the acquisition and underwriting of small multifamily loans (loans of $3 million or less in most markets and $5 million or less in high-cost markets). Through September 30, 2012, Multifamily's

small loan acquisitions totaled $2.2 billion; as of September 30, 2012, Multifamily had a small loan book of $31 billion. Despite the challenges inherent in small loan financing – the fragmented nature of the market, the lack of economies of scale, and the lack of standardization – Multifamily has been a leader in small loan financing, a market segment that serves as a key source of affordable workforce rental housing located close to transportation and jobs, in urban areas, in underserved small towns, and in rural markets.

Fannie Mae also provides financing for specialized types of multifamily housing, including the following:[12]

- Senior housing (7%) – facilities for independent living, assisted living, and specialized dementia care;
- Manufactured housing parks (3%) – communities that lease land and provide related amenities to manufactured home owners and renters; and
- Student housing (1%) – apartment complexes built primarily for students, located on or near the campuses of major colleges and universities.

In addition, $28.1 billion, or 14% of Multifamily's book of business as of September 30, 2012, constituted targeted affordable housing – properties subject to regulatory agreements ensuring long-term affordability by imposing income or rent restrictions in exchange for federal, state or local subsidies.

B. Financial performance and key drivers

Over the last nine years, Fannie Mae's cumulative GAAP pre-tax core net income from the multifamily guaranty business has been approximately $800 million (Figure 12). The business has been consistently profitable on an operating cash basis, but recorded a pre-tax GAAP loss of $1.8 billion in 2009 as a result of provisions taken to boost reserves for future loan losses. A portion of these reserves were subsequently released in 2010, 2011 and 2012, as markets stabilized and borrower credit quality recovered. Excluding crisis-driven results in 2009, annual pre-tax earnings for the core business have been in the range of $200 million to $500 million. Over that same nine-year period, Multifamily's guaranty book of business has grown from $117 billion in 2004 to $202 billion in 2012.

[12] Parenthetical figures indicate the percentage of Multifamily's existing book by each specialized housing type as of September 30, 2012.

Figure 12: Estimated Historical Multifamily Credit Guaranty Financials

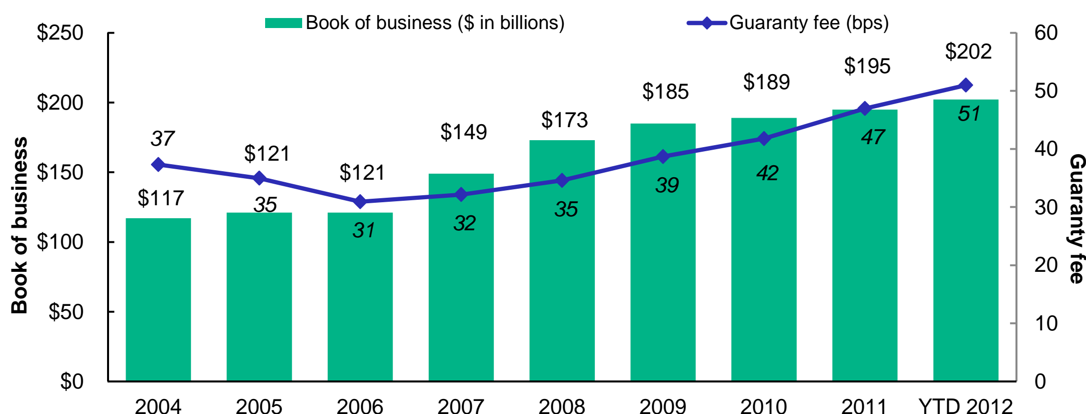
($ in millions)

	Year ended,								September
	2004	2005	2006	2007	2008	2009	2010	2011	YTD 2012
Guaranty fee income	$449	$572	$562	$470	$633	$675	$791	$884	$760
Credit losses	(49)	(29)	(7)	(8)	(52)	(220)	(498)	(391)	(213)
MF gross margin	$400	$543	$555	$462	$581	$455	$293	$493	$547
Fee and other income	$204	$266	$279	$359	$186	$100	$146	$218	$151
Administrative expenses	(391)	(409)	(596)	(548)	(404)	(363)	(384)	(264)	(194)
Core MF income[(1)]	$213	$400	$238	$273	$363	$192	$55	$447	$504
Other credit income (expenses)	$9	$38	$2	($1)	($32)	($1,996)	$304	$111	$454
Other revenue (expenses)	(68)	(109)	(149)	(236)	(133)	(38)	(59)	5	2
MF pre-tax income [(1)]	$154	$329	$91	$36	$198	($1,842)	$300	$563	$960
Average Guaranty book ($B)[(2)]	**114,349**	**118,874**	**118,537**	**131,375**	**161,722**	**179,315**	**186,867**	**191,984**	**198,201**

Source: Fannie Mae 10-K and 10-Q financial statements.
(1) Core MF and pre-tax income excludes low income housing tax credits (LIHTC), multifamily equity investments and insignificant business lines.
(2) Average Multifamily guaranty book of business for 2003 and 2004 is based on beginning and end of year book balances.

Multifamily's earnings come primarily from fee income received for Fannie Mae guarantees on MBS and whole loans. Revenues have grown significantly in recent years, with the total multifamily credit book of business increasing at a compounded annual growth rate of 7% from the end of 2004 through 2012. Over the same period, the average guaranty fee earned on the total credit book has risen from 37 basis points to 51 basis points (Figure 13).

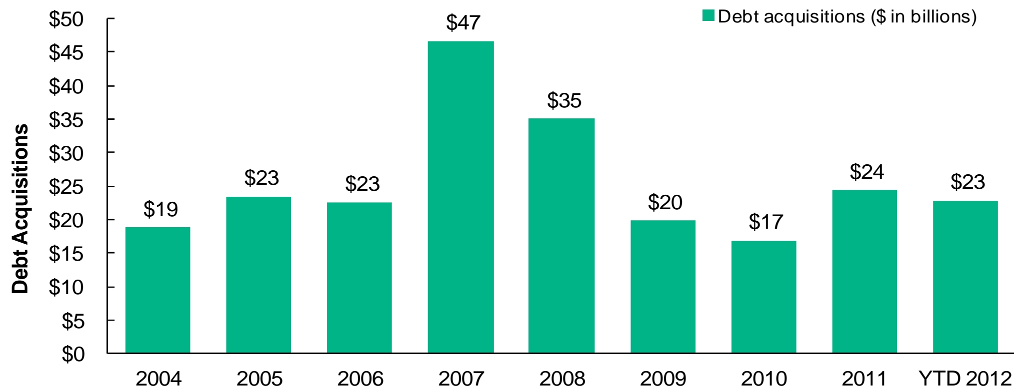
Figure 13: Multifamily End of Period Book of Business and Average Guaranty Fees



Source: Fannie Mae 10-K and 10-Q financial statements.
Note: YTD data as of 3Q'12. Uses contractual guaranty fee rate. 2007 forward excludes Bond Credit Enhancement Liquidity Fees.

The increase in average guaranty fees has been driven by anincrease in the fees charged on new loan acquisitions. Acquisitions of loans with higher guaranty fees have become a larger part of the Multifamily guaranty book of business, while loans with lower guaranty fees continue to liquidate.

Figure 14: Multifamily Total Debt Acquisitions



Source: Fannie Mae. 10K and 10Q Financial Statements and Fannie Mae Multifamily.
Note: YTD data as of 3Q'12.

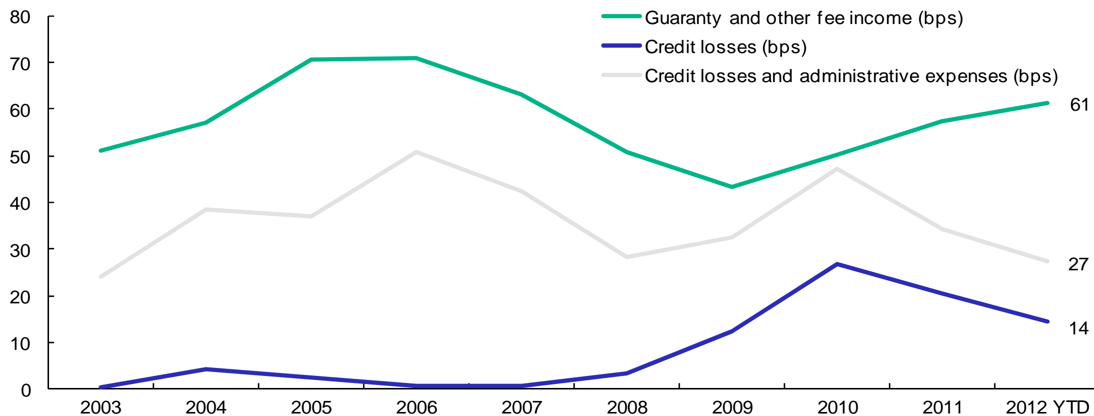
In addition to guaranty fees, Multifamily also derives income from yield maintenance and prepayment premiums.[13] To meet its return expectations, Multifamily must not only ensure that guaranty fees are adequate to cover the credit risk assumed, but must also enforce these contractual yield maintenance premiums, prepayment premiums and other fees. At the same time, Multifamily actively manages its lender relationships and loan surveillance practices to minimize delinquencies and subsequent loan losses, and manages its expenses to maximize efficiency.

Additional financial results related to Multifamily products are included in the Capital Markets group results (and are not reflected in Figure 15 below). Among its other activities, the Capital Markets group buys and holds multifamily whole loans and MBS, financing such purchases with Fannie Mae corporate obligations. The Capital Markets financial results include net interest income related to multifamily loans and securities, gains and losses from the sale of multifamily MBS and re-securitizations, and other miscellaneous income. The Capital Markets group earned estimated net interest income on Fannie Mae multifamily mortgage products of $873 million in 2011, $865 million in 2010, and $785 million in 2009. Net interest income on multifamily loans and securities averaged 73 basis points annually from 2009 through 2011.

As shown in Figure 15 below, guaranty fees have historically been sufficient to cover current year credit losses and administrative expenses, and continued to do so during the recent credit crisis. The GAAP loss recorded by Multifamily in 2009 was driven by non-cash credit provisions to boost our reserve against potential future losses.

[13] Yield maintenance and prepayment premiums are fees generally imposed on multifamily borrowers for loan pay-offs or pay-downs prior to maturity.

Figure 15: Multifamily – Revenue Generation vs. "Cash" Expenses [(1)]



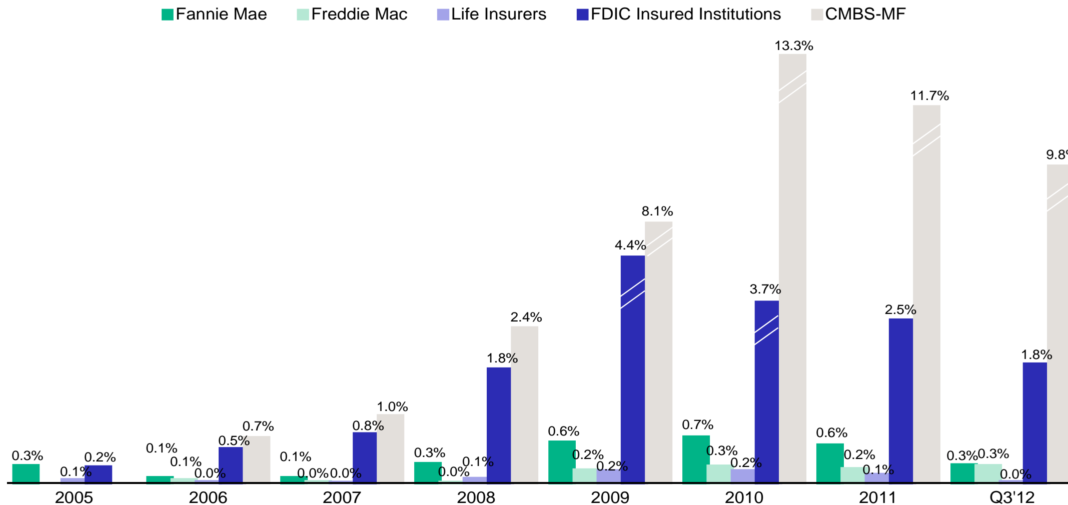
Source: Fannie Mae 10-K and 10-Q financial statements.
Note: YTD data as of 3Q'12.
(1) 2003 – 2007 expense data includes allocated cost of restatement exercise and are not reflective of "run rate" expenses.

C. Credit performance

Multifamily's credit performance remained strong through the recent credit crisis. As shown in Figure 16, Multifamily's serious delinquency rate has consistently been well below one percent of Multifamily's total book. The serious delinquency rate declined to 0.28% as of September 30, 2012, from a peak of 0.80% as of June 30, 2010. These rates compare favorably to the CMBS multifamily serious delinquency rate[14] of 9.82% as of September 30, 2012[15] and the bank and thrift serious delinquency rate of 1.84%. In addition, credit losses and credit loss rates, as well as REO[16] ending inventory, have all declined from their peaks in 2010.

[14] Serious delinquency rate, or SDQ, includes all loans 60 or more days delinquent (including loans in foreclosure and REO).
[15] Source: Trepp
[16] "REO" (real estate owned) means real estate owned by a lender not for normal course business purposes but as a result of foreclosure or acceptance of a deed in lieu of foreclosure.

Figure 16: Multifamily Industry 60+ Serious Delinquency Rates (Days Delinquent)



Source: Fannie Mae, Freddie Mac, CMBS-MF (Trepp), Life Insurers (ACLI source) and Banks (FDIC source).
Note: FDIC Insured Institutions data reflect 90+ day delinquency rates. Delinquency calculation may vary by institution.

D. Delegated Underwriting and Servicing (DUS)

Beginning in 1988, Fannie Mae initiated the DUS program to enhance product standardization in the multifamily market. In standard industry practice, a loan purchaser or guarantor underwrites or re-underwrites a loan prior to deciding whether to purchase or guarantee that loan. Under the DUS model, DUS lenders are pre-approved to underwrite and service loans on behalf of Fannie Mae and have the right to commit Fannie Mae to purchase or guarantee multifamily loans originated in accordance with DUS underwriting guidelines, without Fannie Mae's prior review or approval. This delegated authority enables DUS lenders to respond to customers more rapidly and thereby provides the DUS product line with an important competitive advantage. In exchange for this delegated authority, DUS lenders are required to share the risk of loss over the life of the loan, generally retaining one-third of the underlying credit risk on each loan sold to Fannie Mae. DUS lenders are required to post collateral and maintain certain financial covenants to secure these risk-sharing obligations.

Multifamily principally conducts its business through a select group of lenders, each of which has demonstrated financial strength, extensive multifamily underwriting and servicing experience, strong portfolio performance and a willingness to partner with Fannie Mae to share the risk of the loans they originate and deliver. Single-family, by comparison, deals with more than 2,000 lenders in conducting its consumer-based business and has not historically shared risk with its lenders. As discussed further below, the risk-sharing nature of Multifamily's platform is unique not only within Fannie Mae but also in the commercial real estate market, and is considered to be a major positive differentiator for the Multifamily business.

The 24-member DUS lender network, comprised of both large financial institutions and independent mortgage lenders, has evolved to become Fannie Mae's principal source of multifamily loan deliveries. The following 10 DUS lenders accounted for 71% of loans acquired in 2011:

- Arbor Commercial Funding
- Beech Street Capital
- Berkeley Point Capital
  (formerly Deutsche Bank Berkshire Mortgage)
- CBRE Multifamily Capital
- M&T Reality Capital Corporation
- Oak Grove Commercial Mortgage
- PNC Bank
- Red Mortgage Capital
- Walker & Dunlop
- Wells Fargo Bank

Of these lenders, M&T, PNC and Wells Fargo are large, diversified financial institutions. Walker & Dunlop is an independent public company specializing in multifamily lending.

The DUS program's success derives in large measure from the effective alignment of interests among the borrower, the lender and Fannie Mae. This alignment is supported by key features of the program:

- Shared risk: The DUS program requires that borrowers put cash equity (typically 20% of the value of the property) into the properties securing their loans and requires that lenders selling loans to Fannie Mae retain a share in any losses, giving each party an ongoing stake in the economic outcome of the property.
- Prudent underwriting: DUS underwriting parameters require that loan proceeds be sized on the basis of actual rather than projected income, eliminating the risk inherent in income projection.
- Delegation: The DUS program delegates underwriting and servicing responsibility to risk-sharing lenders, aligning risk, providing certainty and speed of execution, and leveraging the capabilities of private industry players.
- Accountability: The DUS program's asset management, partner risk management, and credit review teams carefully monitor the financial creditworthiness and the underwriting and servicing capabilities of its lenders, as well as the performance and condition of the multifamily properties backing DUS loans.

Delegation and risk sharing allow Multifamily to safely leverage the skills and resources of DUS lenders to bring private capital and market discipline into the multifamily market and to expand and contract the Multifamily business platform as appropriate to meet changing market conditions. The principles underlying the DUS

program have driven a business that has consistently and effectively served the workforce housing market, and that has enjoyed low serious-delinquency rates and losses, thereby generating profitable loans for Fannie Mae and its lenders.

E. Secondary market execution

Multifamily historically offered three execution types: MBS sold to investors or retained by Fannie Mae, whole loan portfolio purchases by Fannie Mae, and bond credit enhancement.[17] In recent years, market forces and policy directives from FHFA and Treasury have required Fannie Mae to step back from whole loan purchases, and MBS now represents the primary execution available for Fannie Mae customers. Figure 17 lays out the historical distribution of Multifamily's book of business by execution type.

Figure 17: Multifamily Book of Business

($ in billions)	Year ended,							
	2009		2010		2011		3Q'2012	
	$	%	$	%	$	%	$	%
Whole loans (cash)	$109	58.7%	$95	50.2%	$77	39.5%	$66	32.5%
MBS	60	32.1	77	40.8	102	52.0	120	59.4
Bond Credit Enhancement	17	9.1	17	9.0	17	8.5	16	8.1

Source: Fannie Mae 10-K and 10-Q financial statements.

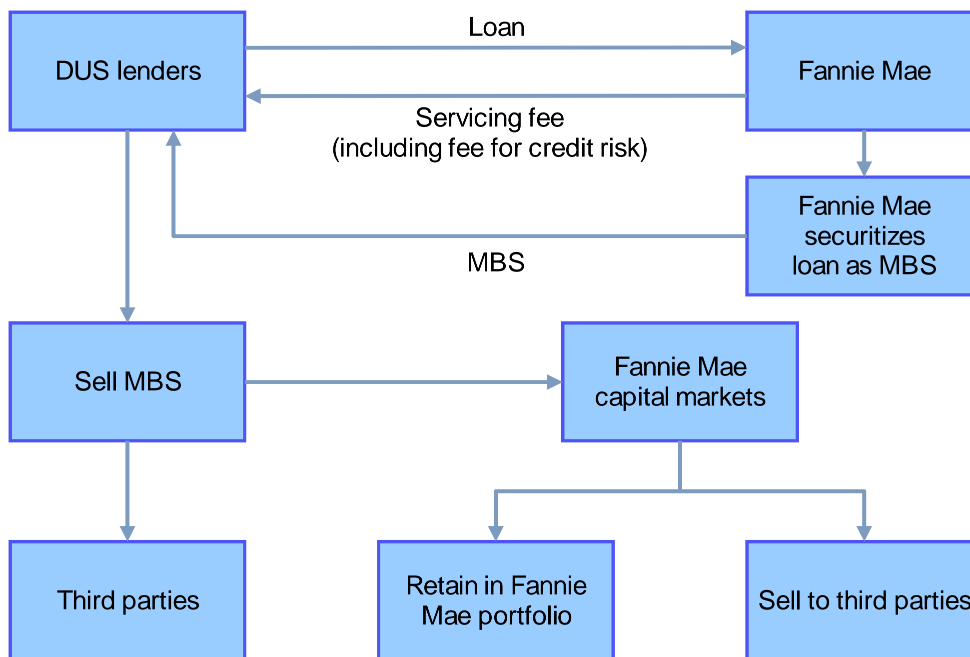
In the typical Multifamily MBS execution, Fannie Mae exchanges a mortgage loan for an MBS backed by that loan. This "single-asset" MBS is then sold to investors and Fannie Mae guarantees the timely payment of principal and interest on the MBS. The single-asset execution offers a number of benefits for Fannie Mae's customers and for Fannie Mae. Originators can put their securitized loans out to bid in a competitive auction where they receive transparent pricing. In addition, they can sell their loans immediately and avoid the need for interest rate hedges to protect against unfavorable changes in interest rates during the period from securitization to sale. At the same time, Fannie Mae avoids the need to aggregate loans for subsequent securitization in a pooled MBS transaction. This reduces the need for interim "warehouse" financing of

[17] From 1994, when Multifamily began securitizing multifamily loans, until 2004, MBS constituted more than 80% of annual acquisition volume. In 2004, to effectively compete with CMBS, Multifamily's acquisition strategy shifted to the cash whole loan execution, in which Fannie Mae purchases a mortgage loan from the lender for cash and holds the mortgage loan in portfolio. Since entering into the SPSPA with the U.S. Treasury Department in 2008, Multifamily's acquisition strategy has returned to the MBS execution in response to Treasury's requirement that Fannie Mae systematically reduce its loan portfolio.

The bond credit enhancement execution provides credit enhancement for fixed and variable interest rate tax-exempt bonds by guaranteeing the timely payment of principal and interest on bonds issued by state and local housing finance agencies to finance affordable rental housing. Prior to conservatorship, Fannie Mae variable rate credit enhancement included a liquidity feature that Fannie Mae is no longer able to provide, and the unavailability of the liquidity feature has led to a significant drop in the volume of Multifamily's bond credit enhancement business in recent years.

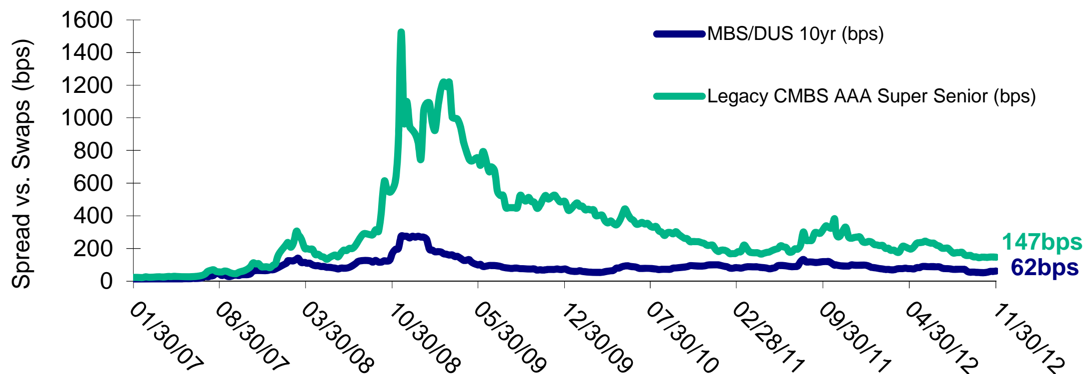
multiple loans. Although most DUS MBS employ the single-asset format, Fannie Mae retains the ability to issue securities backed by pools of mortgage loans and to use alternate structures such as real estate mortgage investment conduits (REMICs). Figure 18 lays out the potential paths a DUS MBS may take, whether being sold as a single asset MBS, aggregated into a pooled offering by Fannie Mae or held in Fannie Mae's portfolio.

Figure 18: The DUS MBS Model



The credit crisis demonstrated that investor demand for government-backed paper can remain robust even in the midst of severe market stress. At the height of the crisis in late 2008, spreads to U.S. Treasuries on DUS paper peaked at approximately 300 basis points. In contrast, as shown in Figure 19 below, even for the most secure (the "super senior") private label AAA CMBS tranches, spreads spiked to approximately 1500 basis points over U.S. Treasuries. Despite the recovery in CMBS market liquidity, spreads in that market remain well above pre-crisis levels. Recently quoted secondary market spreads on legacy private label AAA CMBS were 147 basis points as of November 30, 2012 – approximately 85 basis points wider than the 62 basis point spread on comparable maturity DUS paper as of the same date. As discussed further below, new issue private label CMBS price at much better spreads given the superior credit quality of newly originated loan collateral.

Figure 19: Market Pricing of Commercial CMBS vs. Fannie Mae DUS



Source: JPMorgan, Markit.
Note: Data as of 11/30/12. Pricing for new issue CMBS may not correspond to levels shown for legacy CMBS given differences in expected maturities and the quality of the underlying loan collateral.

F. Charter benefits and burdens

As a division of Fannie Mae, Multifamily enjoys a number of explicit privileges under the Charter. Chief among these is Fannie Mae's exemption from the registration and disclosure requirements the SEC imposes on other non-governmental issuers of publicly-traded securities. In effect, the SEC has treated Fannie Mae's securities as if they were issued or guaranteed by the federal government. In addition, the Charter exempts Fannie Mae's earnings from state and local taxes.

Government sponsorship has also provided indirect benefits, the most obvious being the long-standing assumption in the marketplace of an "implied guarantee" on the Company's debt securities. This perception derived in part from the credit line with the U.S. Treasury built into the Charter, but the guarantee became explicit under the SPSPA entered into with the U.S. Treasury after conservatorship. Bank regulatory rules have historically acknowledged the preferential status of Enterprise debt by assigning lower risk-based capital requirements on bank holdings of Enterprise securities and by allowing Enterprise debt to be used as collateral for borrowings from the Federal Reserve or deposits from governmental entities. The combination of significant scale and perceived safety led the market for Enterprise debt to be highly liquid, with the perceived liquidity further increasing demand for Enterprise securities and reducing Enterprise cost of funding.

The Charter also mandates specific mission objectives for Fannie Mae, among them promoting a liquid, stable secondary market for mortgage loans, enhancing the availability of mortgage credit in underserved markets and seeking to lower the cost of credit to low- and moderate-income families. These latter objectives have been reinforced by subsequent legislation requiring the Enterprise regulators to set quantitative housing goals for the Enterprises. The Department of Housing and Urban Development ("HUD") and, since 2008, FHFA have set specific targets for purchases of identified types of affordable home mortgages as a percentage of Fannie Mae's total

loan purchases. In addition to mandating these mission-related activities, the Charter also prohibits Fannie Mae from engaging in certain activities, primarily those that would allow Fannie Mae to operate in the primary mortgage market. Fannie Mae is not permitted to originate mortgage loans or provide warehouse financing, and its ability to develop new products is tightly limited and subject to express approval by FHFA.

IV. MECHANICS OF SEPARATION[18]

A. Background

In undertaking a preliminary analysis of the mechanics of separation, we engaged Ernst & Young to assist us in developing an operating model of a standalone company. With their assistance, we looked at the Fannie Mae systems and personnel that Multifamily relies on for a variety of essential functions. These include Fannie Mae information technology infrastructure and corporate utilities such as Human Resources, Facilities, Legal, Capital Markets and Securitization, and Finance, all of which would need to be established as separate capabilities for NewCo. This would be accomplished through some combination of cloning existing systems, purchasing replacement systems, and outsourcing systems to third parties. Where it is not possible to shift immediately to a new platform, NewCo would enter into one or more transition services agreements ("TSAs") with Fannie Mae to ensure essential services are maintained and that the costs of these services are defined. The number of TSAs, and their cost, would depend on the amount of time NewCo is given to separate from Fannie Mae. The projected costs reflected in the base case financial model assume a two-to-three year timeframe. If separation were to occur more rapidly, NewCo would need more TSAs and could incur significantly higher separation costs. Newco would in any event establish fully independent platforms as quickly as practicable following separation.

B. Implications

Multifamily has approximately 500 unique "enablers," defined as any process, third party, system, intellectual property or other asset needed to execute the Multifamily business. Many of these enablers share some level of dependency with Fannie Mae and each would need a negotiated resolution to effect a separation. In addition to the need to uncouple systems and "enablers," the significant reduction in expected business volumes available to NewCo as a stand-alone entity, and the need to meet acceptable thresholds for profitability, would require Newco to substantially reduce its cost structure and staffing levels as compared to Multifamily. These reductions are detailed in the financial estimates discussed below. We have assumed for purposes of the analysis that Fannie Mae would bear any associated severance, relocation and property liquidation costs. We have also assumed that NewCo would manage Fannie Mae's Legacy Book with Fannie Mae paying NewCo a competitive fee under an arms-

[18] The legal mechanics of creating an independent new private sector company or subsidiary are well known and do not require exploration at this stage of the analysis.

length asset management contract. We include the cost of staff, systems and other resources needed to service the Legacy Book in NewCo's financial estimates discussed below.

V. REQUIRED CAPITALIZATION

A. Background

In the aftermath of the global financial crisis, there has been widespread agreement that financial institutions did not hold sufficient levels of capital going into the downturn. Journalists and academics have written extensively on the overuse of leverage and the insufficient recognition of risk among borrowers, financial intermediaries and investors. Policymakers have concluded that increasing regulatory capital requirements is one of the best ways to discourage risky behavior and to protect the system from the consequences of an adverse shock. The "Basel III" international regulatory process aims to boost core capital levels, particularly against certain identified types of risk. Enhanced capital regulation has also been a central focus of the Dodd-Frank Act. In short, a consensus has been reached that pre-crisis capital levels were too low and should be increased.

At its most basic level, equity capital represents the excess value of assets over liabilities, and exists to protect creditors from the risk of eroding asset values. As a practical matter, required capital is whatever creditors demand as a condition to providing financing. In the case of a regulated financial institution, the government often provides an explicit or implicit backstop for this funding (e.g., FDIC-insured deposits). Regulators therefore have a stake in and seek to define the amount of capital that is necessary to avoid taxpayer losses. But if a financial institution relies on creditors who lack a guarantee (e.g., "repo"[19] lenders or bondholders), investors may consider regulatory capital requirements insufficient and demand additional capital buffers.

Most regulatory capital regimes define capital requirements relative to the perceived risk (typically credit or market risk) of the assets on balance sheet. The recent crisis has highlighted a third risk to the survival of a financial institution – liquidity risk. The vast majority of financial institutions are exposed to liquidity risk because their creditors have the legal right to withdraw cash faster than the financial institutions are able to raise that cash from maturities or sales of assets. Liquidity risk also has a self-reinforcing quality because when creditors evaluate liquidity risk, they are forced to predict the behavior of other creditors. This can cause precipitous changes in perceived risk that may lead to herd, or panic, behavior such as that seen in the bank runs in the U.S. during the Great Depression and more recently in Europe.

Management teams have few tools available to effectively address liquidity risk. It may simply be impossible to identify assets with short enough maturities to fully match cash outflows in a worst case scenario. At a more practical level, attempting to do so

[19] "Repo" refers to repurchase or reverse repurchase agreements that act as a source of funding for securities and loan portfolios.

may leave a company uncompetitive or unprofitable. The need to sell assets in a distressed market to raise cash exposes a company to losses. Many companies facing liquidity concerns boost capital levels to create a cushion against a forced liquidation that would result in losses. While even a large increase in capitalization may not change the worst case outcomes in terms of liquidity, creditors may take comfort from the belief that such a capital cushion reduces the risk of insolvency. More importantly, creditors may assume that other creditors will take such comfort, thereby reducing the self-reinforcing risk of a liquidity run.

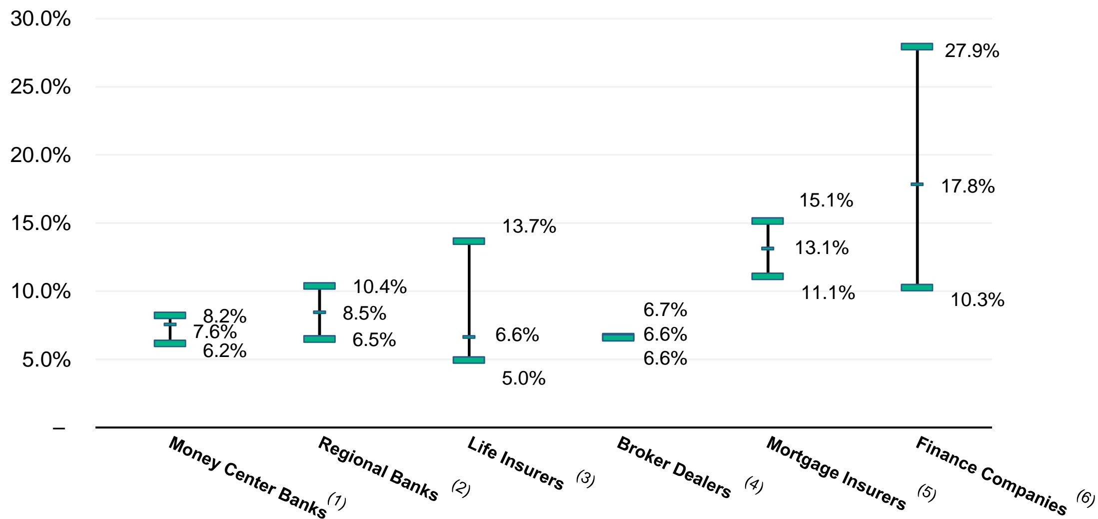
While every financial institution faces some level of liquidity risk, different models have more or less exposure:

- Banks with an explicit government backstop for their deposit funding are fundamentally in the best position. They have one primary liquidity provider, the FDIC, with individual depositors looking to the government, not the bank, for ultimate repayment. Even if a bank has creditors with uninsured liabilities, these creditors can take some comfort from the assumption that regulators will act to avoid an insolvency event that could force taxpayer losses. This dynamic has fueled widespread discomfort with “too big to fail” banks and the unfair pricing advantage banks are often considered to have as a result. Reforms enacted as part of Dodd-Frank are meant to instill a credible threat of liquidation for even the largest institutions. In theory, this should eliminate any perception of implied government support and potential subsidy for banks, but doubts persist about the government’s ultimate willingness to allow big banks to fail.
- Insurance companies are perceived to have advantages similar to banks, with a dedicated source of long-term funding from their policy holders. Many of these policy holders are retail customers, often explicitly protected by state-level guarantees, leading again to the perception of an implicit government backstop. Like banks, many of the largest insurance companies are also expected to be deemed “systematically important financial institutions” (SIFIs) subject to Federal Reserve oversight, and are therefore also likely to be categorized as “too big to fail” by the media.
- Non-bank financial firms that rely solely on the wholesale markets are much more vulnerable to liquidity risk and have little reason to assume they will have access to government support (although whether this is true for the largest non-bank entities has been a subject of intense debate since the crisis). Broker dealers have been subject to the threat of liquidity runs and several failed or nearly failed during the crisis. In response, the surviving entities have increased their capital levels, reduced their balance sheets and boosted their liquidity reserves. Specialty finance companies are arguably in an even worse position. They may be largely or entirely funded by the wholesale markets, but their assets tend to be long-lived, illiquid loans more vulnerable to liquidation losses than the liquid securities held by broker dealers.

B. Comparable companies and relative risk profiles

Figure 20 looks at leverage levels over a broad cross section of private financial institutions grouped by industry sub-sectors. Several points are immediately apparent. Absolute levels of leverage do not meaningfully exceed 9:1 (10% equity-to-assets) even for regulated companies such as banks with access to a government backstop in the form of FDIC-insured deposits. Even lower levels of leverage appear to be the norm for finance companies. The (admittedly small) sample of surviving finance companies included in Figure 20 averages leverage levels closer to 5:1 (20% equity-to-assets).

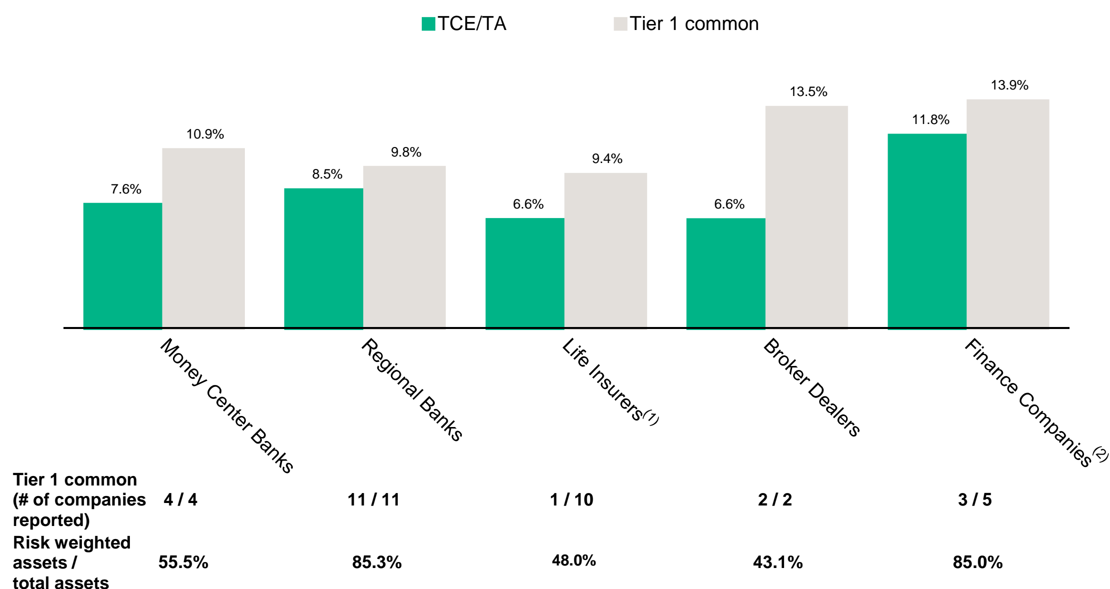
Figure 20: Select Comparable Companies: Tangible Common Equity to Tangible Assets



Source: Company filings, SNL Financial and FactSet.
Note: Data as of Q3'12. Numbers represent maximums, medians and minimums.
(1) Money Center Banks include JPMorgan, Bank of America, Citigroup, and Wells Fargo.
(2) Regional Banks include USBank, PNC, Capital One, SunTrust, BB&T, Regions, Fifth-Third, Key, M&T, Comerica and Huntington.
(3) Life Insurers include MetLife, Prudential, Ameriprise, Hartford, Principal, Lincoln, Unum, Protective, StanCorp, and Primerica.
(4) Broker Dealers include Goldman Sachs and Morgan Stanley.
(5) Mortgage Insurers include MGIC Investment Group, Radian and Genworth.
(6) Finance Companies include CIT, Newstar, CapitalSource, Discover and American Express.

Companies with higher quality, more liquid assets can operate with somewhat higher levels of leverage. Figure 21 looks at Federal Reserve regulated companies within the different industry subsectors. It compares their GAAP Tangible Common Equity to Tangible Assets ratio to their regulatory Tier 1 Common Equity to Risk-Weighted Assets ratio. The risk-weighted assets ratio is considered a more accurate measure of the credit and market risk of a company's assets and, therefore, a better indicator of what the proper level of leverage should be. Risk-based ratios cluster on either side of 10% in response to regulatory capital requirements, whereas GAAP leverage ratios show greater variation based on differences in relative asset risk.

Figure 21: Tier 1 Common vs. Tangible Common Equity Ratios for Regulated Companies



	Money Center Banks	Regional Banks	Life Insurers(1)	Broker Dealers	Finance Companies(2)
Tier 1 common (# of companies reported)	**4 / 4**	**11 / 11**	**1 / 10**	**2 / 2**	**3 / 5**
Risk weighted assets / total assets	**55.5%**	**85.3%**	**48.0%**	**43.1%**	**85.0%**

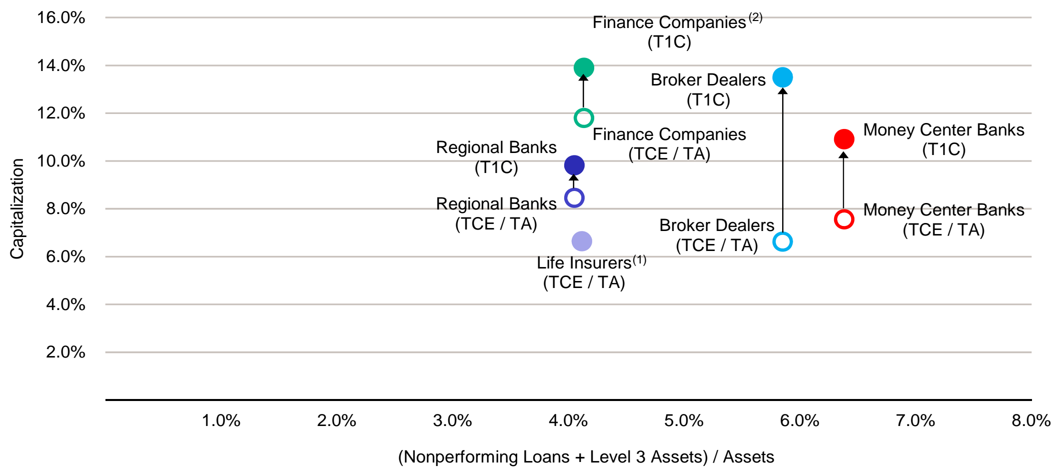
Source: Company filings, SNL Financial and FactSet.
Note: All data as of Q3'12.
See Figure 20 for the list of companies included in Money Center Banks, Regional Banks, Life Insurers, Broker Dealers, and Finance Companies.
(1) Tier 1 common median for Life Insurers only includes MetLife.
(2) Finance companies include CIT, Discover and American Express.

Finance companies generally employ much less leverage (i.e., have a higher equity-to-assets ratio) than other sectors, even after adjusting for asset quality. Both regulatory and GAAP measures of equity-to-assets exceed 10%.

Figure 22 looks at capitalization relative to asset quality for the various subsectors using average levels of combined non-performing loans and "Level 3"[20] assets as a proxy for higher risk assets. For the period from 2008 to 2012, spanning the entire financial crisis and recession, there is a positive correlation between capital and asset risk, but it is not a strong relationship and risk-based capital levels are often a much higher multiple of identified assets for "low risk" institutions than they are for "high risk" peers.

[20] Level 3 assets are assets – typically illiquid – that are difficult to value because significant inputs to a fair value measurement are not observable.

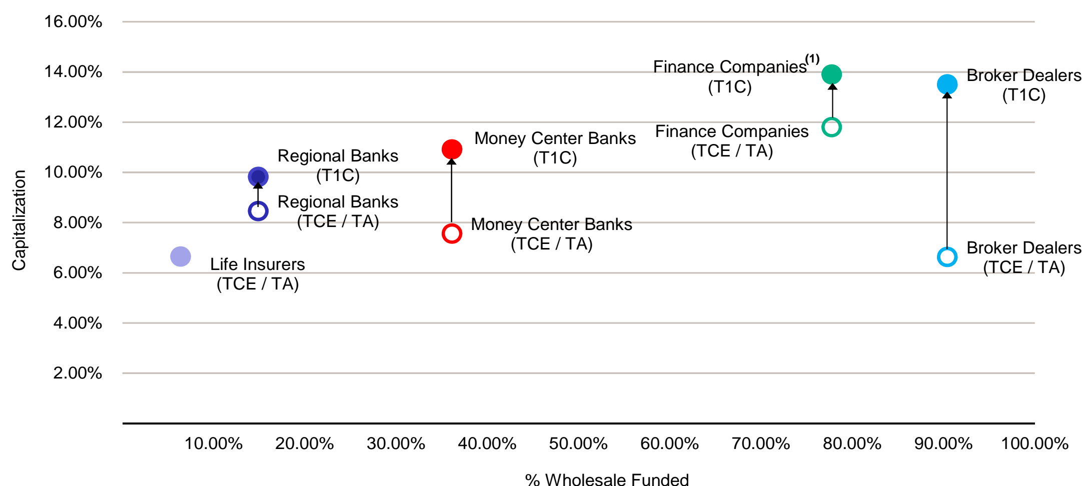
Figure 22: Capitalization Relative to Identified High Risk Assets



Source: Company filings, SNL Financial and FactSet.
Note: Capitalization data as of Q3'12. (Nonperforming loans + Level 3 Assets / Assets) quarterly averages from Q1'08 to Q3'12.
See Figure 20 for the list of companies included in Money Center Banks, Regional Banks, Life Insurers, Broker Dealers, Mortgage Insurers and Finance Companies.
(1) Life Insurers data is based on Level 3 assets only. Tier 1 common is not shown since data is only available for MetLife.
(2) Finance companies include CIT, Discover and American Express.

Alternatively, Figure 23 looks at capitalization of a company relative to the company's reliance on wholesale funding. "Wholesale funding" means all cash liabilities that lack a "retail" customer relationship such as FDIC-insured bank deposits or insurance policy reserves. Wholesale funding is inherently riskier than retail funding because wholesale creditors must rely solely on the creditworthiness of the entity they are lending to, with no government backstop. If creditors lose faith in a company, they will attempt to withdraw their funding. If one or more major creditors simultaneously seek return of their funds, the company risks suffering a "liquidity crisis" that could prove fatal. Figure 23 clearly shows that the sectors most reliant on wholesale funding (e.g., broker dealers and finance companies) also hold the highest levels of risk-based capital.

Figure 23: Capitalization Relative to Reliance on Wholesale Funding



Source: Company filings, SNL Financial and FactSet.
Note: Data as of Q3'12. Numbers represent medians.
See Figure 20 for the list of companies included in Money Center Banks, Regional Banks, Life Insurers, Broker Dealers, Mortgage Insurers and Finance Companies.
(1) Finance companies include CIT, Discover and American Express.

C. Implications for NewCo

As discussed above, Multifamily's credit performance was exceptional through the credit crisis, with low levels of serious delinquencies and realized losses. Despite Multifamily's impressive performance under difficult market conditions, investors are not likely to place much weight on Fannie Mae's historical credit performance in evaluating how much capital Newco would require when operating as a stand-alone business without a guarantee. The absence of a guarantee undermines NewCo's ability to compete for the highest quality loans and, as a result, NewCo's credit risk profile would change materially going forward. Investors seeking to determine the appropriate capital level for NewCo are more likely to look at comparable private companies than at Multifamily's historical performance. While these comparable companies may include banks and life insurers, the lack of diversity in NewCo's business lines beyond commercial lending and its high reliance on wholesale funding would likely lead investors to view specialty finance companies as more appropriate comparisons. Indeed, investors are likely to demand an additional cushion of capital even relative to specialty finance companies to compensate for characteristics unique to NewCo: its "monoline" concentration in multifamily lending and lack of alternative business lines, the untested nature of its business model, the high percentage of wholesale funding it employs, and the political risk investors may attribute to a business historically intertwined with public policy objectives.

Given how active regulated banks are in the multifamily market, investors are also likely to look to the bank capital rules for insight into how much capital to require of

an unregulated lender. Bank regulators do not perceive multifamily loans to be particularly low risk assets, in part because the losses experienced by banks in this asset class have been higher than the losses experienced by the Enterprises (see Figure 16), likely due to the lower cost funding the Enterprises have enjoyed and the greater access to higher quality loans this funding advantage has provided them. NewCo would not enjoy this advantage. NewCo's expected losses, and the associated risk weight, should therefore be no better than for banks and may well be higher. Under the most recent proposal for bank capital rules, multifamily loans will carry risk weights of 50% or 100% depending on specific loan characteristics. Once NewCo increases pricing and higher quality loans are lost to lower cost competitors, we expect the average risk weighting of NewCo's loans to be well above 50%.

These considerations could easily justify an assumed capital requirement well above 10% of assets, but we are mindful of the impact of higher capital requirements on the pricing NewCo would need to charge to earn a sufficient return. In effect, high capital requirements can be self-fulfilling if they force pricing to a level where an entity holds only the worst credit quality loans on balance sheet. As mentioned above, in order not to prejudice the analysis of product-level pricing, we have chosen capital requirements closer to those used by banks (e.g., common equity equal to 10% of risk-weighted assets or a 9:1 leverage ratio). As the analysis below will show, even this moderate level of capitalization has a dramatic impact on NewCo's loan pricing, and on its competitiveness in the market. It is by no means certain that NewCo could actually raise capital based on a 9:1 leverage assumption.

D. Securitization as a substitute for equity capital

Traditional corporate debt and equity are not the only sources of capital available to support loan origination. Both Enterprises currently rely on the securitization market as the primary vehicle to fund their multifamily lending volumes, and banks and other originators are making more active use of this market as it recovers from the financial crisis. In many cases, securitization acts as an alternative form of debt financing. (This is the role asset-backed securities ("ABS") often play for banks and other originators of credit card and automobile loans.) But by selling both the senior and subordinate tranches to investors, an originator can effectively sell all or nearly all of the underlying loan cash flows. In theory, this allows an originator to avoid, or at least greatly reduce, the need to raise equity capital against assets held on balance sheet. In practice, however, this is likely to be unacceptable to investors or other market participants.

Figure 24 lays out a hypothetical CMBS bond structure that is broadly representative of transactions currently being executed in the "private label," non-GSE securitization market, and shows the amount of subordination required to achieve increasingly higher ratings from the major rating agencies.

Figure 24: Representative Private Label CMBS Structure ($1 Billion of Underlying Loans)

Rating	Balance ($)	Sub (%)	Balance (%)	Avg. Life	Spread	Pre-tax Yield	Price	Proceeds
AAAA	$700,000,000	30.00%	70.0%	~10 years	90	2.52%	~100%	$700,000,000
AAA	$100,000,000	20.00%	10.0%	~9.5 years	160	3.22%	~100%	$100,000,000
AA	50,000,000	15.00%	5.0%	~9.5 years	180	3.42%	~100%	50,000,000
AAA IO	1,000,000,000				200	3.62%	~0.7%	73,250,000
A	45,000,000	10.50%	4.5%	~9.5years	250	4.12%	~100%	45,000,000
BBB	40,000,000	6.50%	4.0%	~9.5years	500	6.62%	~79%	31,600,000
NR	65,000,000	–	6.5%	~9.5years		20.00%	~31%	20,150,000
Total	**$1,000,000,000**							**$1,020,000,000**
Combined A / BBB / NR (without expenses)								
	150,000,000	–	7.5%	~9.5years		9.48%		96,750,000
Combined A / BBB / NR (with 2% deal profit and expenses)								
	150,000,000	–	7.5%	~9.5years		12.77%		76,750,000

Source: Fannie Mae.

The following points are relevant in analyzing the data shown in Figure 24:

- Rating agencies evaluate the risk of loss primarily on the basis of the perceived credit quality of the loans collateralizing the securitization. Required subordination will therefore change through time in response to changes in the collateral and changing economic conditions.
- Rating agencies seek to model a downside case consistent with the probability of loss as defined by their ratings, so subordination levels may also change in response to adjustments in rating agency models.
- The amount of subordination required to achieve a “AAA” rating in the current market is approximately 20% of the principal balance of the underlying loans, while an investment grade rating of at least “BBB” requires only approximately 6.5% subordination.
- The yield demanded by investors in junior tranches is relatively low, with an average pre-tax yield of approximately 9.5% based on current market spreads for the single-A through unrated classes. Those are the pieces NewCo would expect to hold.
- Even if one adds in reasonable (e.g. 2% of the deal value) estimates of the gain on sale demanded by the securitization issuer and other fees and expenses

(important, since the pricing from investors is not fully passed through to borrowers), the average pre-tax yield might only rise to approximately 13%.

- Combined pre-tax yields of approximately 13% are well below the returns typically expected by equity investors, so originators might choose to sell non-investment grade bonds to investors and use the resulting capital to make additional loans.
- Although the face amounts of the single-A through unrated classes constitute 15% of the loan balances, these securities sell at a discount given their high yields, so proceeds from their sale approximate only 10% of the loan balances.
- Conversely, the AAA "super senior," AAA "mezzanine," "AA" and "AAA IO" securities sell at a premium that in aggregate offsets the discounts on the junior securities and generates an overall "par" execution inclusive of expenses.

In summary, a securitization strategy can allow originators to leverage their existing capital by selling credit risk to investors. Depending on the state of the market, this can be done at prices that allow originators to resell 100% of their loans' cash flows at a profit, thereby allowing them to recycle their capital to make additional loans. While the appeal of this model is obvious – and has driven the arguments for securitization by those advocating for higher levels of private capital in the housing market – in the case of NewCo, it does not stand up to rigorous financial analysis.

E. Role of the CMBS market for NewCo

To assess the value of securitization for NewCo, we must determine whether the availability of the subordinate CMBS market as an alternative capital source affects our assumptions about NewCo's capitalization and, if so, how access to the CMBS market changes NewCo's proposed business model. Although the CMBS market may at times provide an alternative source of both debt and "equity" financing for NewCo, our analysis strongly suggests that NewCo would still need to raise its own equity capital, in part because of the actual and perceived instability of the CMBS market and in particular because of the instability of the B-piece market.

To protect against the risks of improper underwriting and fraudulent loan data, rating agencies and investors require the CMBS issuer to make representations and warranties regarding the accuracy of data and compliance with all relevant legal requirements. These representations and warranties have value, however, only if they are enforceable and the issuer has the financial resources to back them up. An issuer that has sourced all of its "capital" from the CMBS market cannot stand behind its representations and warranties. Since the start of the financial crisis, issuers of residential mortgage securities, predominately large banks and financial institutions, have been sued and fined billions of dollars for fraud and misrepresentation in the issuance of these securities. In the CMBS securitization market, many of these institutions are also faced with demands and lawsuits from servicers to buy back loans for breach of representations and warranties. Only well capitalized institutions can satisfy the rating agencies that they have sufficient wherewithal to back their

representations and warranties and thereby justify the ratings on their securitizations. As a result, the largest securitization issuers are typically large, diversified financial institutions with high ratings and strong capital levels validated by regulatory supervision. There is little doubt that these issuers can satisfy their obligations under their securitization agreements.

A stand-alone, unregulated specialty finance company such as NewCo would be in a very different position. Rating agencies and CMBS investors will require a meaningful stock of unpledged assets (i.e., capital) to fund potential claims. If these resources are insufficient, rating agencies may be unable to rate a transaction or may demand much higher subordination levels for a security to achieve a given rating. Investors may similarly refuse to buy the resulting CMBS or demand much higher yields in return for taking such counter-party risk. NewCo, therefore, would need to raise a substantial amount of traditional corporate equity in order to be viable in the marketplace. An issuer of CMBS would also need substantial equity capital to aggregate loans for a CMBS issuance. Under normal market conditions, a stand-alone entity can generally borrow approximately 90% of the balance of its aggregated loans from a "warehouse" lender. The remainder, or lender "haircut," roughly 10% of the aggregated amount, would need to be provided from equity. The required "haircut" is necessary to protect the warehouse lender, and for that matter the issuer, against aggregation risk - the risk that changes in market prices during the aggregation period will reduce the value of the aggregated collateral.

The recent history of the securitization markets has been marked by significant volatility in pricing, dramatic changes in rating agency views of risk and periods when markets simply were not available for most issuers. This has not been a concern for Multifamily since the Enterprises have had continuous access to the market throughout the crisis – due to the long-standing implicit, and more recently explicit, government guarantee of their securities.

Given this history, however, equity investors in NewCo are unlikely to assume the CMBS markets will be available as a reliable source of leverage for their capital. If NewCo builds a model based solely on a CMBS exit strategy, it raises the question of how it would operate when the CMBS market is closed (as it has been on multiple occasions). Investors in NewCo would likely answer that question by demanding a financial model that generates an adequate return even in the absence of CMBS market liquidity. In light of these considerations, we do not believe NewCo could be considered viable premised on the sale of 100% of its credit risk to subordinate CMBS investors. Equity investors will not assume through-the-cycle availability of the subordinate CMBS market and would most likely demand that NewCo hold sufficient traditional corporate equity to execute on its business plan. Therefore, our base case business model assumes that NewCo would raise its own equity capital, enabling it either to buy its own B pieces or hold loans on its own balance sheet. To determine whether NewCo could viably raise this traditional equity capital, we need a financial model that allows NewCo to hold subordinate exposure on balance sheet and to earn a sufficient return. The financial model must show how much equity NewCo needs to raise and how NewCo would raise it in the absence of a securitization exit. Having raised this larger amount of

equity, NewCo would have little choice but to deploy it by holding assets on balance sheet. This would be the case even if the CMBS markets were available to lay off this risk to investors. Given these considerations, NewCo's potential use of the CMBS markets from time to time could represent "upside" for its investors but is not relevant for our analysis of viability.

VI. IMPLICATIONS FOR FUNDING MODEL

A. SEC registration requirements

As described above, Multifamily's single-asset MBS model provides significant benefits for its lenders, Fannie Mae and the liquidity of the broader market. Lenders can immediately access liquidity for their loans and can achieve transparent pricing through a competitive bid for their loans. Fannie Mae avoids the risks and costs associated with aggregating pools of loans for later securitization. Investors are confident that a vigorous secondary market exists for the MBS in their portfolios, including a re-securitization market that allows for the creation of larger, more diversified MBS pools. All these factors result in extremely tight MBS spreads, a more efficient multifamily finance market and therefore lower costs to borrowers.

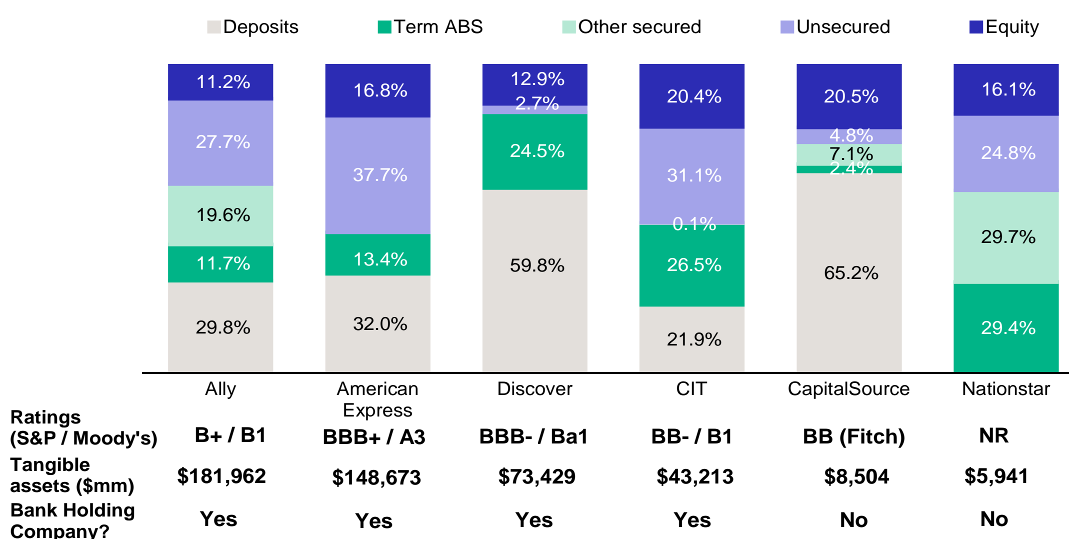
Most if not all of these benefits would be lost were the Multifamily business to operate as a stand-alone entity without a guarantee. The cost of SEC registration would make a single-asset securitization model prohibitively expensive. The periodic reporting requirements associated with SEC registration would also be overly burdensome for NewCo. Under current law each MBS trust (i.e., each single asset pool) is required to file a monthly report with the SEC detailing the distributions made during the preceding month as well as an annual Form 10-K, and proposed regulations would require the monthly filing of extensive performance data for each pool. In addition to the burden on NewCo, there is some question about the SEC's ability to review approximately 2,700 issuances per year and handle the volume of periodic reports generated post-issuance by those 2,700 new MBS pools over the life of those transactions.

From the DUS lenders' perspective, they would no longer be able to obtain bids from multiple buyers in the well-developed market for Fannie Mae guaranteed MBS, and instead would receive only NewCo's bid to purchase the loan for subsequent securitization. In turn, NewCo would be forced to hold loans on its balance sheet over a period of weeks or months, until such time as aggregate loan balances are large enough to permit a cost-effective securitization. The aggregation period would create interest rate and spread risk that NewCo could only partially mitigate through costly hedging transactions. Even with appropriate levels of hedging, market disruptions have repeatedly driven interest rate spread widening that has caused the shutdown of the securitization market, forced the permanent closure of a significant numbers of conduit operations and caused billions of dollars of losses for these entities and their parents. NewCo, as a stand-alone entity, would be particularly vulnerable to market disruptions and to interest rate and spread risk because it has no alternative sources of income beyond its multifamily loan portfolio.

B. Funding profiles of comparable companies

The aggregation model described above is employed by all specialty finance companies active in the securitization markets today for a substantial portion of their loan production. Importantly, while these companies use the securitization markets to help fund their operations, they also have significant amounts of other types of funding. Figure 25, below, shows the funding mix of a range of finance companies, their relative size and their long-term debt ratings from the major rating agencies. All rely on a mix of corporate debt and securitization funding with the proportions varying among companies. It should also be noted that these companies hold a significantly higher percentage of equity than the 10% equity we assume for NewCo. In our attempt to show NewCo in the very best light, we have kept NewCo's equity percentage at the low end of the range. In addition, specialty finance companies that are also bank holding companies have access to some level of low cost and reliable deposit funding – funds that would not be available to NewCo.

Figure 25: Funding Mix for Select Specialty Finance Companies



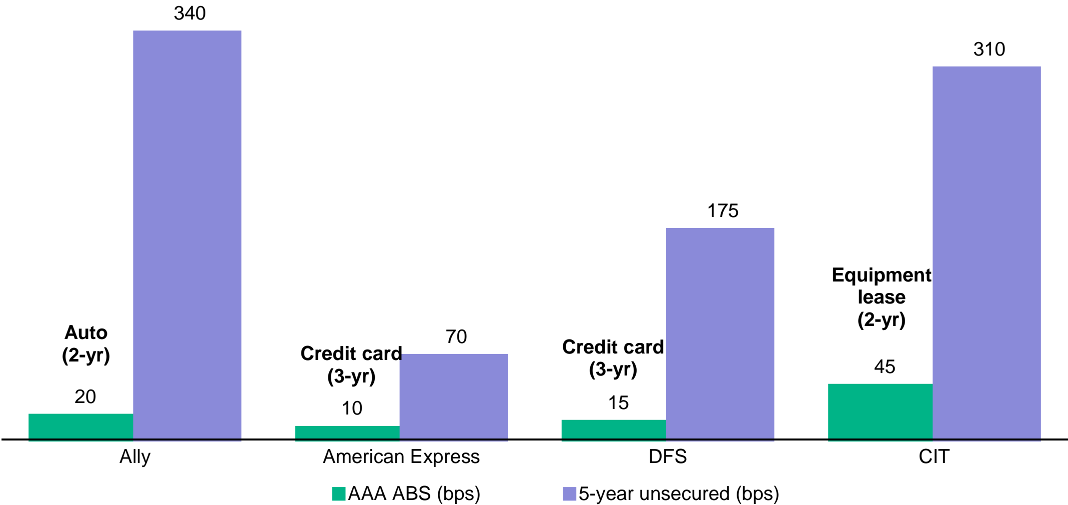
Source: Company filings, SNL Financial.
Note: All data as of Q3'2012. Assumes all unsecured borrowings for CapitalSource are long-term borrowings. All companies exclude other "non-cash" liabilities.

There are also substantial differences among specialty finance companies in the cost of their unsecured funding, differences not wholly explained by their corporate ratings. (There may also be differences in their cost of securitization, but that would be mainly a function of the asset classes they originate.) Figure 26 shows the estimated cost of five-year unsecured debt and ratings for a number of specialty finance companies. It also shows the estimated cost of AAA ABS[21] funding for the asset class

[21] ABS, or asset-backed securities, are securitized pools of loans, including credit card receivables, automobile loans and other consumer and commercial loans.

from which these companies obtain the most ABS funding. The key points to highlight are that ABS funding is generally less costly than unsecured debt and that the differences among companies in terms of ABS funding costs are much more modest than the differences in their cost of unsecured financing.

Figure 26: Marginal Funding Cost: Secured vs. Unsecured (Estimated)

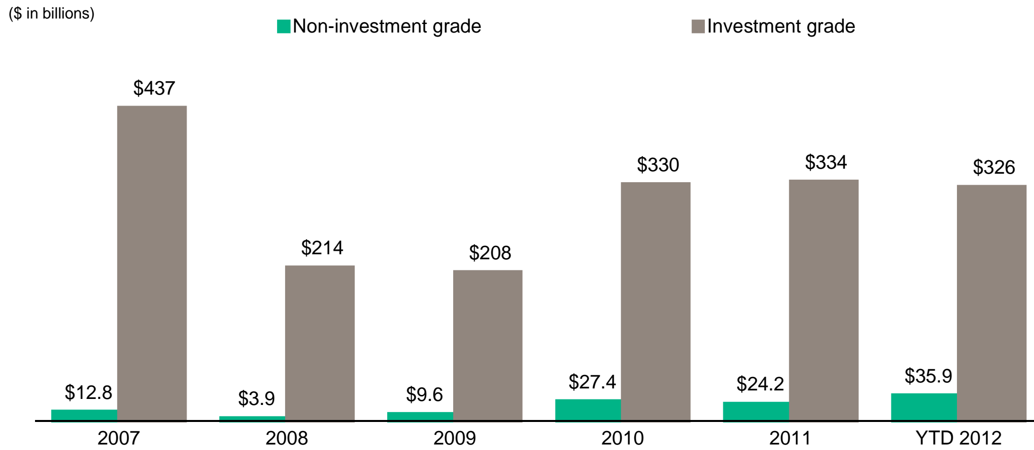


Source: Bloomberg, Credit Suisse.
Note: Spread to Treasuries. Data as of 11/30/12.

C. NewCo's funding model

As a stand-alone entity operating without a guarantee, NewCo could fund its loan originations on a long-term basis in one of two ways. The first would be to raise unsecured funding from the corporate debt market. Newco would target an investment-grade rating but may be unable to achieve such a high rating as a first-time debt issuer. In addition, NewCo's capital level may be insufficient to satisfy rating agencies' requirements for an investment grade rating. Ratings have a somewhat circular, self-reinforcing quality in that the largest companies often have better ratings, better ratings typically result in a lower cost of funds, and a lower cost of funds often increases a company's ability to compete for a larger share of high quality originations. This dynamic does not favor NewCo. Of course, a lower rated NewCo could seek to raise funding in the non-investment grade (i.e., "high-yield") debt market. But the availability of this financing is subject to much greater variability depending on market conditions (Figure 27) and it comes at a higher cost (Figure 28) – both factors that make non-investment grade funding unlikely as an attractive or desirable base case funding source for NewCo.

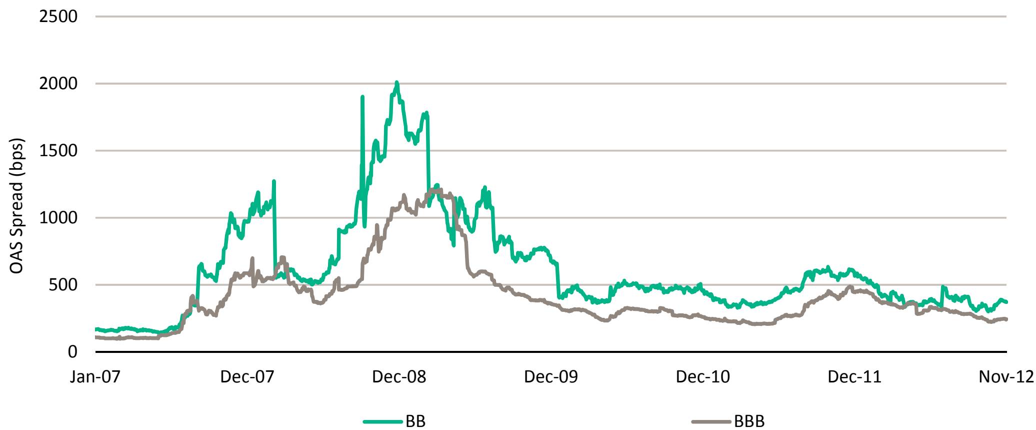
Figure 27: Investment Grade vs. Non-investment Grade Debt Issuance for Financials



Source: DealLogic. Data as of 11/30/2012.

Figure 28: BBB vs. BB Spread for Financials (4-7 Years)

Date	BB Spread	BBB Spread	Differential
2007 Avg	371	233	138
2008 Avg	987	605	382
2009 Avg	1,025	723	302
2010 Avg	453	289	164
2011 Avg	466	308	157
2012 Avg	388	313	76



Source: Liquid U.S. Corporate Index (LUCI). Data as of 11/30/2012.

Given the uncertainties of access and cost associated with the unsecured debt market, we have assumed – solely for purposes of evaluating the question of viability – that Newco (unlike actual specialty finance companies active in the market) would raise 100% of its required debt financing from the private label CMBS market. As discussed above, however, reliance on the private label CMBS market for consistently priced funding, whether investment grade or below investment grade, is not assured. In practice NewCo would rely on a range of debt instruments with the ultimate mix determined by market conditions. We base our estimate of the cost of this financing on the pricing of private label CMBS deals recently sold in the market. Given its target levels of capitalization in terms of equity-to-assets, NewCo would be able to issue only the most senior, highly rated CMBS. In the interest of showing NewCo in the best light,

we therefore assume NewCo would issue CMBS tranches at ratings ranging from AA through "super senior" AAA. At current spread levels, this funding is competitive with the cost of A-rated unsecured debt from banks and other financial companies. Depending on the subordination levels NewCo obtains for its securitizations, NewCo might also need to issue lower rated "mezzanine" CMBS. This would result in a modest increase in NewCo's average cost of funding. And, finally, we assume that NewCo would hold the non-investment rated "B-pieces" from its securitizations on balance sheet and that they would be funded by NewCo's initial capital raise and the retained earnings NewCo generates over time.[22] As discussed above, NewCo might ultimately choose to sell B-pieces to investors from time to time under appropriate market conditions.

VII. PRODUCT-LEVEL ANALYSIS

A. Framework

Without a Fannie Mae guarantee, NewCo would have no choice but to raise pricing to borrowers above that currently charged by Multifamily. The amount of the increase would depend primarily on NewCo's cost of capital, which in turn would depend on Newco's cost of debt, the amount of capital required by NewCo's investors, and the returns demanded by these equity investors. Obviously, higher overall pricing for the entire capital structure would make NewCo less competitive with other providers, including banks, insurance companies and other private finance companies. What is less clear is how this change in the competitive landscape would impact specific borrowers.

In order to make reasonable projections of business volumes for NewCo, we have looked at different subsectors of Multifamily's existing borrower mix. For each borrower category, we ask the following questions:

- Given our assumptions about NewCo's cost of capital and other expenses, where could NewCo price a loan to the borrower and still earn a sufficient return?

- Based on our assumptions for how banks and other lenders would fund themselves, at what price would NewCo's competitors be able to offer the same loan?

- Does the borrower have characteristics that would cause it to fall outside other lenders' underwriting criteria or otherwise not to qualify for financing from those lenders?

To the extent that NewCo's competitors can make loans at materially lower yields, we assume NewCo would get none of that volume. We also assume, for purposes of this

[22] For purposes of GAAP accounting, the retention of B-pieces would likely result in the securitized loans being treated as remaining on NewCo's balance sheet, while the sale of securities by NewCo would be recorded as "secured liabilities."

analysis, that NewCo would lend to borrowers substantially similar to (i.e., not significantly less qualified than) those already in Multifamily's portfolio. Below we detail our assumptions about the relative cost of capital and other key inputs into loan pricing for subsets of NewCo's production sorted by our estimate of how attractive these subsets would be to banks and other lenders.

As mentioned above, a key area of uncertainty is whether NewCo would be able to access the subordinate CMBS market on competitive terms with bank-owned and other securitization conduits. The volume of loans that are securitized in the private-label CMBS market (as opposed to being retained on the balance sheet of a bank, insurance company or other financial intermediary) varies through time, based largely on how aggressive pricing is for senior and subordinate bonds. Some borrowers value the longer maturity dates, fixed interest rates and other customized features offered by the conduit programs. These features generally make the loans unattractive for balance sheet lenders and help ensure a minimum level of CMBS supply even when pricing is less attractive. NewCo would expect to gain a share of this market if it can match the terms of its competitors.

B. Major competitors

There is approximately $850 billion of multifamily mortgage debt currently outstanding in the U.S. Assuming an eight year average term for these loans, refinancing activity alone would drive a minimum of $100 billion of new lending each year, even before accounting for the financing of new projects. Since entering conservatorship, Fannie Mae and Freddie Mac have used their guarantee programs to provide a secondary market outlet for $30 to $50 billion in annual loan production. Were the Enterprises to lose access to their government guarantee, this liquidity would need to come from some combination of the new stand-alone entities plus the other existing lenders. If the Enterprises cease to operate as they do now and are not replaced by alternative liquidity providers with access to a government guarantee, multifamily debt would likely become more expensive, property values would fall, and loan demand would fall. While we cannot know how far demand would fall, regardless of the drop, the market would undoubtedly perceive a shortage of reasonably priced multifamily debt.

The major lenders active in the multifamily market today are banks, life insurance companies and CMBS conduits, each of which is discussed below:

- <u>Banks:</u> For banks, outstanding loans on balance sheet total approximately $250 billion and originations have ranged from $30 to $80 billion in recent years. Regional and community banks have tended to focus on "in footprint" relationship lending to smaller borrowers, but the largest banks will look nationwide at larger loans to larger borrowers. Banks typically favor variable rate loans or fixed rate loans with shorter maturities or with rate reset features. Although the newly proposed "Basel III" capital rules are likely to result in a substantial increase in the average risk-weighting of bank real estate portfolios, the proposed rules also provide for lower risk-weightings for certain well-underwritten multifamily loans. For banks to avail themselves of these lower risk weights, they will need to

change their typical loan product. The current rules require that a multifamily loan must have a term of seven years or more to be eligible for the lower risk weighting, a longer maturity than most commercial banks currently offer. But banks will likely change their practices in order to reduce their capital requirements. Also, in the current slow economy, banks are generating substantial excess capital and liquidity and have significant capacity to increase their multifamily lending despite the new rules if they are able to meet their return targets. With lending spreads likely to increase if the Enterprises or other entities no longer have access to government guarantees, the banks would be more likely to hit these return targets.

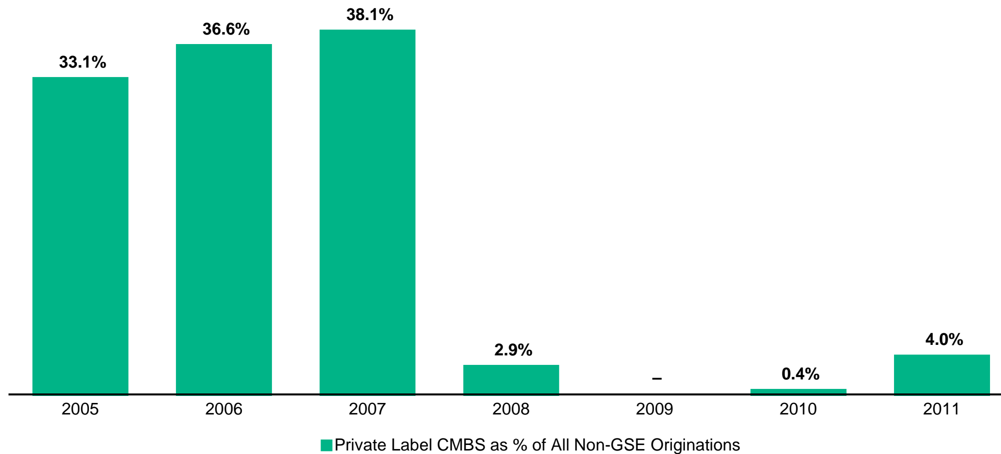
- Life Insurance Companies: For life insurance companies, outstanding loans on balance sheet total approximately $50 billion and originations have ranged from $5 billion to $11 billion in recent years. Insurers have tended to focus on the highest quality ("Class A") properties in the largest markets, and usually find longer term, fixed rate loans attractive. Their business is also less borrower relationship focused, and they will exit the market when other assets offer better relative returns (as they did most recently in 2009). Regulatory capital requirements for insurance companies can be lower than for banks, but are likely to be identical for the largest insurance companies since these companies will likely be subject to Federal Reserve regulations as "non-bank SIFIs." In the current low interest rate environment, insurance companies, like banks, are seeking real estate loans because of their relatively high spreads, but their capacity to increase lending volumes is likely not as high as for banks.

- CMBS conduits: The outstanding securitized volume of multifamily loans (excluding the Enterprises) totals approximately $167 billion and issuance in recent years has ranged from $36 billion (at the peak of the boom) to zero (at the height of the crisis). CMBS volume has started to pick up significantly over the past few months. Importantly, most CMBS transactions consist of loans secured by a mixture of the major commercial property types, and not exclusively multifamily loans. These diversified pools generally get better rating agency treatment. NewCo's securitizations with its multifamily-only collateral would be at a competitive disadvantage relative to other conduits. Conduits also are more willing than life insurance companies or banks to fund "Class B" and "Class C" loans in primary, secondary or tertiary markets. As a result, conduits will lend on a greater variety of multifamily assets.

  Most of the large conduits are affiliated with major financial institutions and benefit from their parents' balance sheets and infrastructure. Independent lenders originating for a securitization exit generally have relationships with major financial institutions that provide a ready outlet for their loan production. Conduits are completely reliant on capital markets liquidity, particularly in the B-piece market, to facilitate their originations. In periods of market stress, the conduits have been forced to withdraw from the market, often sustaining large losses in the process. But in a healthy market, the incremental capacity of the private label CMBS market is potentially significant. However, even in the very aggressive

pre-crisis period, conduit originations by non-Enterprise issuers accounted for no more than 40% of the non-Enterprise market (Figure 29), with the remainder going to balance sheet lenders. Even the 40% level may be misleadingly high because it includes some level of private label CMBS purchases by the Enterprises and these would not exist in a fully private market.

Figure 29: Private label CMBS as a Percentage of all Non-GSE Purchased Originations



Source: Fannie Mae, Freddie Mac, Ginnie Mae, Mortgage Bankers Association and Trepp.

- FHA and Ginnie Mae: The other major capital provider in the multifamily market is FHA through Ginnie Mae and similar programs. Ginnie Mae has guaranteed approximately $60 billion in total loans and its annual production has ranged from $4 billion to $16 billion in recent years. The major focus of FHA in the multifamily market has been to finance new construction in select sectors while refinancing loans in its existing portfolio. It would be a significant departure from the FHA's current practices to expand its focus to include the loans generally financed by the Enterprises (the refinance of conventional multifamily projects) so as to meaningfully offset a decline in financing from the Enterprises. Of course, expanding FHA's role in conventional multifamily financing would undermine any stated objective of either contracting the government's role in multifamily finance or reducing the government's credit risk in the market. For these reasons, we have not assumed an expanded role for the FHA or other government programs.

Given the constraints discussed above, we assume the major competitors at the margin for loans currently guaranteed by the Enterprises would be banks (or insurance companies operating under bank-like capital requirements) and bank-owned CMBS conduits. We are implicitly assuming that these entities would have the immediate capacity to pick up the market share lost by the Enterprises. In reality, there could be a period of market dislocation until such time as interest rates increase and the market develops sufficient capacity to replace lost Enterprise volume.

C. Relevant market segments

For purposes of estimating NewCo's potential origination volumes as a stand-alone entity operating without a guarantee, we have divided the market based on three separate criteria that drive the intensity of competition for new loans:

- Size of the local real estate market (as defined by Metropolitan Statistical Areas or "MSAs"):[23] Large banks and insurance companies have historically had greater interest and deeper market penetration in the "Primary" (the top 10 MSAs by population, containing approximately 29% of the U.S. population) and "Secondary" (the next 20 MSAs by population, containing approximately an additional 21% of the population)[24] markets since denser markets allow greater leverage for their personnel and branding. As a result, the remaining "Tertiary" markets containing over half of the population are less competitive, but these markets have been an area of focus for Multifamily given its mandate under the Charter to enhance access to credit in underserved markets.

- Credit quality: Regulated companies operate under stringent underwriting criteria that discourage higher risk lending. Low debt service coverage ratios, high loan-to-value ratios and other risk factors will limit the amount of credit available to those borrowers and will boost pricing. The "Basel III" Notice of Proposed Rulemaking from the Federal Reserve[25] provides detailed guidance for what is required to obtain the lowest possible risk weight of 50% for multifamily assets. To simplify our analysis, we define loans that qualify for the reduced risk-weighting for regulated institutions as "Prime" loans. The remaining loans will receive a 100% risk-weighting and we assume they will effectively be considered "Non-prime" by regulated lenders.

- Product type: By definition, most lenders focus on more "generic" properties. Niche asset classes such as senior, student and manufactured housing ("Specialized Assets") require greater expertise to properly underwrite the credit exposure and impose higher diligence, compliance and surveillance expense on lenders.

Using these criteria, we have identified four logical segments to evaluate with respect to how competitive NewCo would be as a stand-alone entity:

- Prime loans in Primary and Secondary markets: This is the market most attractive to large banks and other lenders. For purposes of the analysis, we assume they would represent 45% of NewCo's average total market originations through the cycle.

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[23] U.S. Census Bureau – Metropolitan and micropolitan statistical areas are defined by the U.S. Office of Management and Budget (OMB) and are the result of the application of published standards to Census Bureau data.
[24] American Community Survey.
[25] OCC, FDIC and Federal Reserve System NPR dated August 30, 2012.

- Non-prime loans in Primary and Secondary markets: Major lenders are active in these markets, but loans to these borrowers will be less attractive given their higher risk weight and potential to breach internal or regulatory concentration limits. Even if banks and other lenders are willing to lend to these borrowers, they are likely to charge more to cover the additional capital requirements and higher expected losses associated with these credits. We assume they would represent 20% of NewCo's average total market originations through the cycle.

- Loans in Tertiary markets: Major lenders are much less active in these markets given the cost and other issues discussed above. Community banks are active in these markets, but their interest is likely to be limited to smaller loans of the highest credit quality. In addition, the community banks are not likely to offer as aggressive pricing as either large banks or CMBS conduits provide to high quality credits in the major markets. We assume they would represent 25% of NewCo's average total market originations through the cycle.

- Loans for Specialized Asset classes: Other lenders are less active in these products for the reasons discussed above and are likely to price these loans wider in order to cover their greater expense and perceived risk. We assume they would represent 10% of NewCo's average total market originations through the cycle.

D. Summary results

Figure 30 lays out our framework of the assumed "building blocks" for the breakeven pricing of a Prime loan in the Primary and Secondary markets for NewCo, large banks and insurance companies and bank-owned CMBS conduits. The "building blocks" are totaled and expressed as spreads (or additional rates of interest) above the assumed benchmark 10-year Treasury rate.[26] The buildup assumes each participant needs to earn a return sufficient to cover expected credit losses, operating expenses and the cost of funding the loan in the debt markets (credit losses and operating expenses are assumed to vary by product, but are the same across lenders). It then shows the estimated additional return necessary to cover the cost of capitalizing the loan based on each participant's assumed capital requirements and target returns on equity. The chart highlights a number of important themes:

- Moving to a stand-alone model operating without a guarantee (i.e., from Multifamily to NewCo) would require a significant rise in pricing even for loans considered "Prime." To meet a 12% run-rate return on equity target assuming 10% equity-to-assets would require loan yields to rise by approximately 110 basis points from the levels implied by current guaranty and servicing fees charged on Fannie Mae DUS MBS.

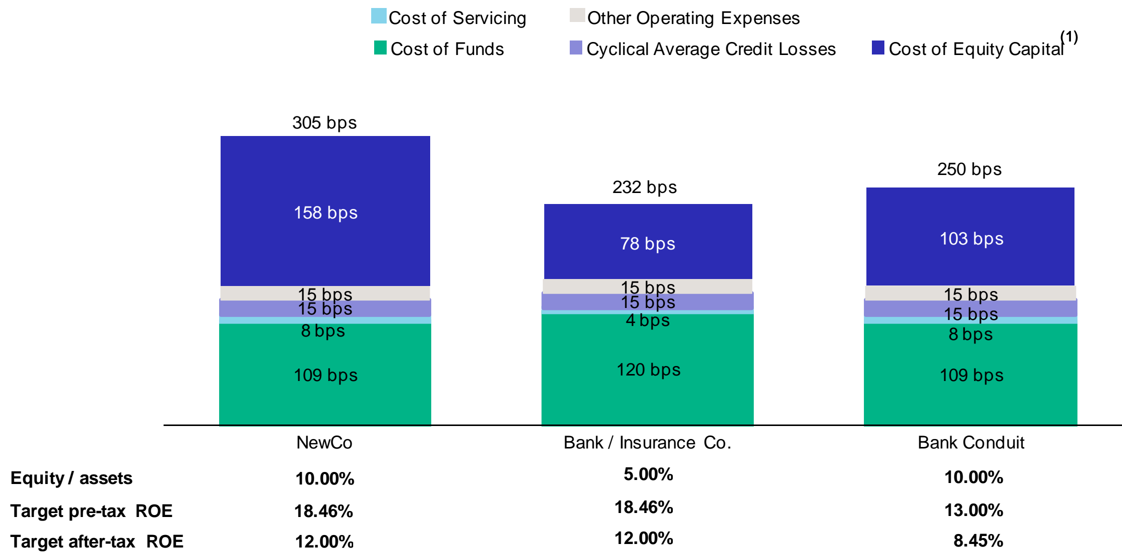
[26] Per the Federal Reserve H-15 report, the analysis assumes a benchmark 10-year Treasury yield of 1.62% as of November 30, 2012

- The loss of the Fannie Mae guarantee and the resulting increase in the cost of debt funding drives slightly less than half this increase. As noted above, while "super senior" AAA CMBS spreads have tightened considerably since the crisis, as of November 2012, new issue spreads remain approximately 30 basis points above the spreads on comparable maturity DUS MBS. Given the need to sell the super senior AAA, the AAA-rated "mezzanine" class and AA-rated subordinate CMBS (as well as the less liquid AAA interest-only security) to raise the required funding, we are assuming a combined spread 47 basis points wider than DUS MBS below.[27]

- The remaining difference in implied loan yields is mainly a function of the higher capital levels that would be required of NewCo as a stand-alone entity as well as the impact of a less efficient cost structure for a smaller NewCo. The increase in the cost of capital may be expressed as continuing payments to our DUS partners under a loss share structure that reduces our capital needs, or as higher capital requirements under a revised loss share structure. How this would be done in practice would need to be negotiated with NewCo's lenders, but the details would have little impact on required loan yields.

[27] As shown in Figure 24, super senior AAAs are priced at +90 over 10-year Treasuries, mezzanine AAAs at +160, AAs at +180 and the AAA IO at +200. Their combined yield is +109 over the same 10-year Treasury.

Figure 30: Primary / Secondary Markets – Prime Credit



	NewCo	Bank / Insurance Co.	Bank Conduit
Equity / assets	**10.00%**	**5.00%**	**10.00%**
Target pre-tax ROE	**18.46%**	**18.46%**	**13.00%**
Target after-tax ROE	**12.00%**	**12.00%**	**8.45%**

Source: Fannie Mae.
(1) The incremental yield required to cover the cost of equity is; (i) the assumed required return on equity, multiplied by (ii) the assumed equity percentage of assets. For example, in the case of "NewCo," an 18.46% target pre-tax ROE multiplied by 10% equity to assets implies 185 basis points of incremental equity cost. However, the analysis already assumes a funding cost of 2.71% (a 1.62% UST yield plus a CMBS spread of 109 basis points) applies to the entire loan balance. The incremental cost associated with equity funding is therefore only 15.75% (18.46% less 2.71%). Multiplying this incremental cost by the same 10% equity to assets gives the 158 basis points listed in the chart. This same framework is followed in all other examples

- Banks and other balance sheet lenders would have a distinct advantage in making Prime loans. Based on current market levels, banks would not have any advantage in terms of senior funding costs. We do not assume banks rely on deposit funding – instead, we assume a marginal cost of funds equal to the cost of issuing unsecured debt. The real advantage for banks for this product would be its cost of equity capital. A 50% assumed risk weight would allow these lenders to allocate half the capital we are assuming for NewCo, a difference worth approximately 80 basis points in terms of loan pricing. To the extent that banks service loans on their own behalf, they can also avoid supporting the profitability of a third-party servicer – this would allow them to operate with a lower servicing cost. We therefore assume a cost of four basis points per annum for servicing as opposed to eight basis points in servicing fees paid by NewCo. Overall, bank pricing for Prime loans would need to increase by approximately 35 basis points relative to legacy Fannie Mae pricing.

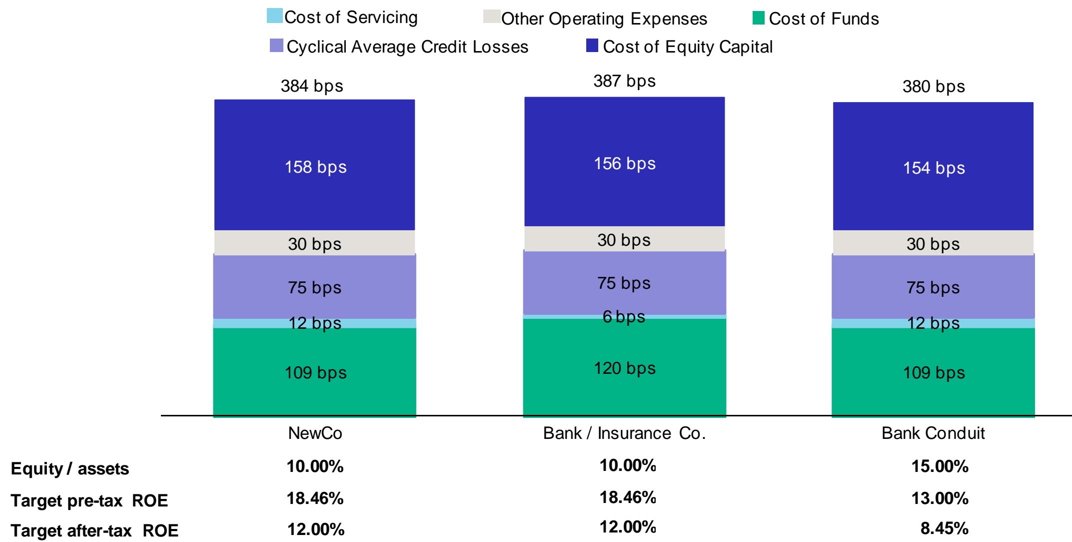
- A securitized execution through a bank-owned CMBS conduit offers economics similar to the economics of holding a loan on a bank balance sheet. While the required yields on subordinate CMBS are much lower than the bank's target return on equity, the amount of subordination that needs to be sold is much larger than the assumed on-balance sheet capital requirement for banks. As a result, the net cost of capitalizing the risk remains somewhat higher in the securitized execution.

- Were NewCo able to access the CMBS markets on the same terms as banks, it could compete with these lenders on an equal basis. But any incremental capital requirements or difference in CMBS execution would undermine NewCo's ability to compete. At the limit, NewCo would hold 100% of the subordinate CMBS and its costs would be as shown in the base case for NewCo.

Figure 31 lays out the same framework for Non-prime loans. We assume all participants would make the same assessment of underlying credit quality and assume higher base case losses. Losses are assumed to be 75 basis points per annum (versus 15 basis points per annum for Prime loans). Marginal operating and servicing expenses are assumed to be higher than for Prime loans (30 and 12 basis points per annum respectively as opposed to 15 and 8 basis points). We do not assume any difference in the cost of funding for Non-prime loans. The key differences amongst lenders (and relative to Prime loans) are therefore a function of how the loans are capitalized:

- Given the 100% assumed risk weight, banks would need to double their capital allocation to these assets, leaving them with no leverage advantage over NewCo. Given similar return on equity targets, the only advantages they could have relative to NewCo would be their funding costs (including any benefit from deposit funding) or potential operating efficiencies. (While we have assumed marginal operating expenses are identical for all participants, NewCo, as a stand-alone entity unable to share infrastructure with other businesses, would likely have a higher cost structure.) Pricing for these loans would need to increase by approximately 180 to 190 basis points across lenders relative to legacy Fannie Mae pricing to fully compensate for the higher cost of debt and equity funding, as well as the higher base case level of losses.

Figure 31: Primary / Secondary Markets – Non-Prime Credit

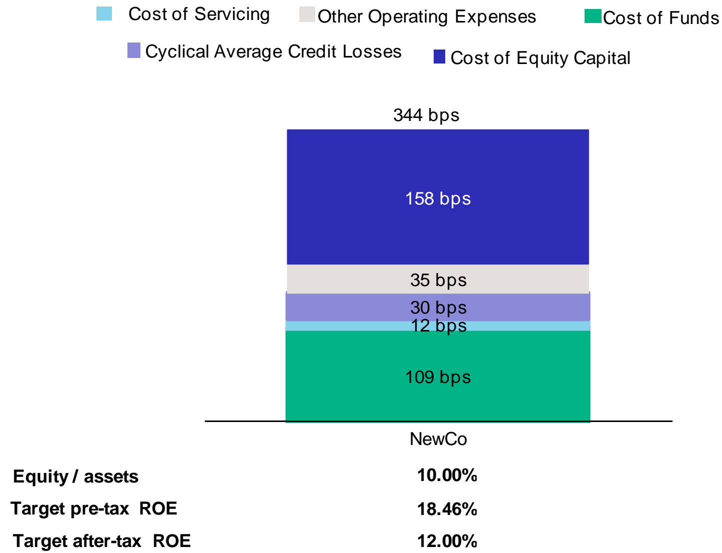


Source: Fannie Mae.

- CMBS conduits are not subject to regulatory capital requirements, but their rating agency capital structures are highly sensitive to the characteristics of the underlying collateral. A higher loan-to-value ratio, lower debt service coverage ratio or other risk factors would force larger amounts of subordination (e.g., 20% versus 15%) and would likely lead to wider pricing from investors. As a result, they too might not price loans much differently from NewCo. Again, in order to show NewCo in the best possible light, NewCo's equity remains relatively static at 10% for both loan types, a level assumed to be imposed by NewCo's investors and creditors based on their overall assessment of the risk of the venture, irrespective of loan credit quality.

Figure 32 applies the same framework for loans in Tertiary markets. Importantly, these loans are not necessarily riskier than loans in Primary and Secondary markets. Indeed, many of the loans in these markets would be considered Prime based on the analysis discussed above and banks could allocate less capital towards them than NewCo would be required to hold. Losses are therefore assumed to be 30 basis points per annum (reflecting a mix of Prime loans at 15 basis points per annum and Non-Prime loans at 75 basis points per annum). However, these markets are fundamentally less competitive than the Primary and Secondary MSAs. Lending in Tertiary markets requires more specialized knowledge of local markets and therefore will be more costly on a percentage basis to underwrite and service. As a result, NewCo's operating expenses and servicing costs are assumed to be 35 basis points and 12 basis points respectively (versus 15 basis points and eight basis points for Prime loans). Local community banks may be active in the market, but concentration limits should inhibit their ability to price others out of the market. NewCo should therefore be able to capture a share of this market despite the need to significantly increase pricing (approximately 145 basis points from current Multifamily pricing).

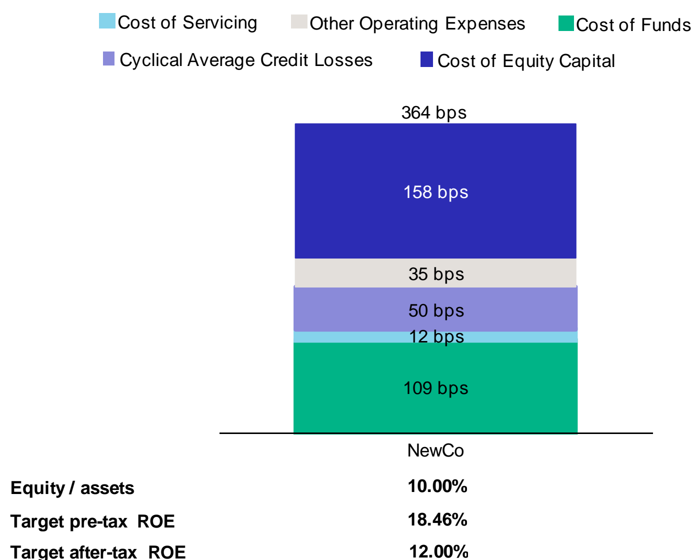
Figure 32: Tertiary Markets – All Credits



Source: Fannie Mae.

Similar dynamics are likely to exist in the markets for Specialized assets given the customized nature of the underwriting and servicing processes. NewCo's operating expenses and servicing costs are again assumed to be 35 basis points and 12 basis points respectively. Credit losses are assumed to be 50 basis points per annum, higher than for Prime and Tertiary market loans, but lower than for Non-prime loans. Figure 33 shows the resulting impact on NewCo's pricing over Multifamily (approximately 165 basis points) for these loans.

Figure 33: Specialized Assets



	NewCo
Equity / assets	**10.00%**
Target pre-tax ROE	**18.46%**
Target after-tax ROE	**12.00%**

Source: Fannie Mae.

In summary, NewCo would need to raise pricing across the board for all of its products to cover its less efficient cost structure relative to the legacy Multifamily model, to absorb the impact of losing the Fannie Mae guarantee and to earn an adequate return for its owners. As a result, NewCo's loan yields are likely to rise by as much as 165 basis points on average from what Multifamily is charging today. The impact of this increase would not be uniform across borrowers, geographies or loan types. Higher credit quality loans in the larger markets are likely to attract capital from banks, insurance companies and CMBS investors. As a result, they might see loan yields rise by as little as 35 basis points (although, to put this in context, a 35 basis point rise exceeds the cumulative increase in Multifamily's guaranty fees since 2009). But niche products, loans to lower quality borrowers and loans for properties located in smaller markets are likely to see yields increase by 145 to 190 basis points or more, depending on the product. This is not a surprising result. Eliminating liquidity-driven cost disparities was a core part of the mission of the Enterprises. Removing the Enterprises from the market is therefore likely to bring back those disparities.

We expect NewCo's share of the market for prime borrowers in the larger markets to be essentially zero as a result of its inability to price loans competitively. But as discussed above, we see this segment comprising less than half of the total market. Given NewCo's greater ability to price loans competitively in other markets and the lack of competition from the most active lenders, we assume NewCo can maintain a 10% market share in the remaining Non-prime market (20% of total market), Tertiary market (25% of total market) and Specialized Asset segments (10% of total market). This is not a particularly scientific estimate – as mentioned above, this is one of the most at-risk assumptions made in our analysis, requiring that NewCo obtain an overall market share of 5.5% and approximately $7 billion of originations annually in a $120 billion origination

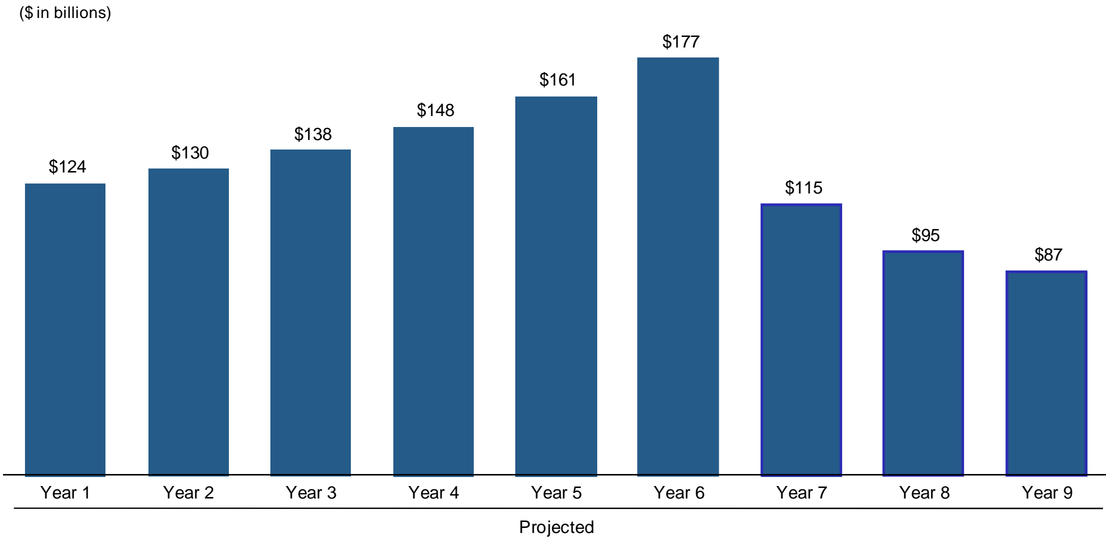
market. Loan yields and market share are two of the critical drivers of our financial projections and changes in either could have a marked impact on projected outcomes.

VIII. FINANCIAL PROJECTIONS

A. Balance sheet assumptions

Our analysis assumes a nine-year market cycle (Figure 34), consisting of six growth years and three stressed years, in order to capture the variability inherent in the market. We also assume that NewCo commences operations in 2013 and that the total multifamily originations market would be $124 billion in the first year. We assume originations grow at an average of 3.5% over the cycle, based on 3% assumed inflation plus 0.5% real growth in housing demand. However, growth is not assumed to be linear but rather includes accelerating growth through the cycle peak in the sixth year, and then a trough decline of approximately 50% in years seven through nine.[28]

Figure 34: Assumed Originations – Total Market



Source: Company projections.

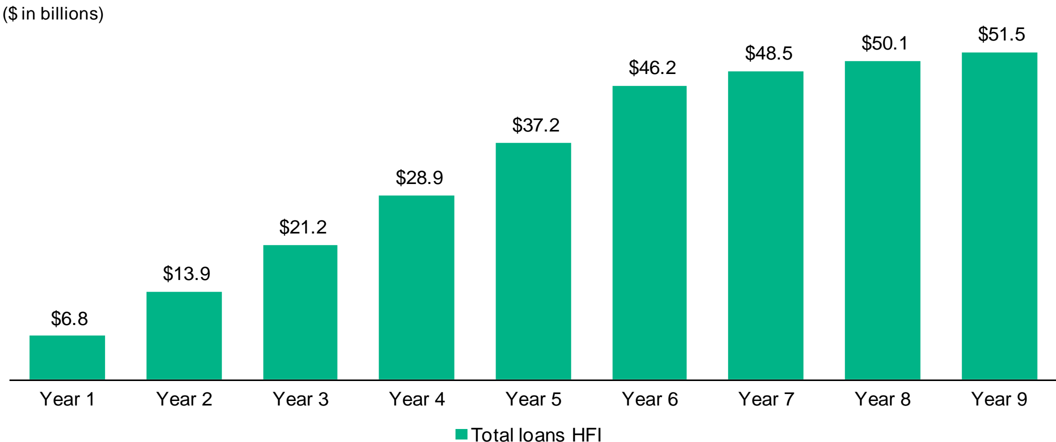
The model assumes a base case market share of 5.5% as estimated in the product-level analysis from the previous section. This implies approximately $7 billion of loan production in the first year. We do not assume any changes in the mix of products originated through the cycle, but we do assume NewCo would become less competitive in the down cycle since its access to funding is at greater risk than for its competitors and its cost of funds is likely to widen relative to competitors in times of stress. We are therefore estimating that NewCo's market share would fall by half to 2.75% in the stress

[28] For the period from 1990 to 2011, the average growth rate for Multifamily debt outstanding was approximately 5%; however, given the lower overall growth rates projected for the U.S. economy in the future, we used a rate of 3.5%. Source: Federal Reserve, Flow of Funds Multifamily Mortgage Debt Outstanding.

years seven through nine. In practice, it may be difficult for NewCo to reduce its originations to such a large extent, despite its loss of competitiveness. A large percentage of new originations are simply the refinancing of loans on existing properties. If these loans cannot be refinanced, the borrower has little choice but to default. Our assumption that NewCo would lose market share implicitly assumes other lenders would willingly take that share. If that assumption proves wrong, NewCo might need to extend new financing, even if unprofitable, to avoid higher credit losses on the loans it owns or is managing on behalf of Fannie Mae.

All new loan production is assumed to be held on balance sheet. Outstanding loans amortize at approximately 2% per annum, and principal balances are reduced by approximately 17% over 10 years, at which point the loans mature. The resulting gross loan portfolio grows rapidly to approximately $46 billion by year six. Growth then slows over the next three years given our assumption of lower aggregate originations and a reduced market share in the stress case. The portfolio balance reaches approximately $51 billion in year nine, after which maturities on existing loans would begin to offset growth from new originations (Figure 35).

Figure 35: NewCo Loan Portfolio



Source: Company projections.

We assume conservatively that NewCo would maintain an initial Allowance for Loan & Lease Losses (ALLL) of 1.5% of gross loans given base case expected losses of 25 basis points per annum. However, as seen with Multifamily and other lenders during the crisis, the required allowance is likely to increase sharply in response to rising credit losses. We assume the ALLL rises to 4.5% in the down cycle when assumed credit losses rise to 100 basis points per annum.

While multifamily loans would be NewCo's primary asset, NewCo would also maintain a modest liquidity portfolio of cash and highly rated securities equal to 3% of its assets. NewCo would also have Property, Plant and Equipment on balance sheet related to its facilities and technology as well as a modest amount of Accrued Interest Receivable and other assets. In addition to its own originations, NewCo would receive

asset management fees from Fannie Mae of five basis points per annum of the outstanding loan balances ($100 million for the first year of operations) to continue servicing the approximately $200 billion Legacy Book. As a result of maturities and other liquidations, we expect the Legacy Book portfolio to amortize by 10% a year and to be fully amortized by 2022.

As discussed in detail above, we assume senior, AAA- and AA-rated CMBS would be the primary funding vehicle for the retained loan portfolio. However, given the need to register offerings with the SEC, NewCo would need to aggregate loans ahead of securitization. This aggregation period would require short-term “warehouse” funding from banks or broker dealers, secured by the loans in the warehouse. Total warehouse and term CMBS funding would be no more 90% of the associated loan portfolio, with the remaining loan portfolio funded by equity capital and retained earnings. We assume NewCo would issue a modest amount of unsecured corporate debt to fund its low risk liquidity portfolio and may have a modest amount of other liabilities on balance sheet related to reserves or expenses. All earnings are assumed to be retained in order to minimize the need to raise equity from investors. Once the business model reaches a point of sufficient maturity, NewCo would release excess capital to investors through dividends or share repurchases.

B. Income statement assumptions

The primary driver of NewCo’s revenues would be the spread between the yield on NewCo’s loan portfolio and the cost of its CMBS funding. As discussed above, we assume that NewCo can significantly increase pricing for a subset of the loans Multifamily is making today, while the remainder would be lost to competitors. The average assumed spread on NewCo originations is approximately 362 basis points over U.S. Treasury yields. At a current 10-Year U.S. Treasury yield of 1.62%, this implies a loan yield of 5.24%. For simplicity, this yield assumption is assumed to be inclusive of prepayment premiums and other fees that might be broken out separately in NewCo’s GAAP income statement.

Funding for the portfolio would come from a mix of short-term warehouse funding during the aggregation period and long-term CMBS thereafter. As detailed above, the cost of this primarily AAA CMBS funding would be approximately 109 basis points over U.S. Treasuries based on current market levels and implies a base case funding cost of 2.71% using the same 1.62% 10-Year U.S. Treasury benchmark. Because NewCo would hedge the interest rate risk on loans in the warehouse, the effective cost of warehouse funding is likely to be similar to that of long-term CMBS.

The resulting net interest margin between NewCo’s loans and its borrowings is approximately 263 basis points in the base case, inclusive of fees and other revenue, as well as the impact of funding a portion of the balance sheet with equity, offset by the negative carry on the liquidity portfolio. However, in the down cycle we assume NewCo’s funding costs would rise substantially. In previous market cycles, the spreads demanded by specialty finance company investors (in both the unsecured and asset-backed markets) have risen by several hundred basis points, and have remained

elevated for an extended period (Figures 19 and 28). Of course, only a subset of companies was able to raise funds at these higher spreads – some lost access to the market altogether. To capture the impact of higher funding costs on NewCo, our projections assume an immediate 300 basis point increase in the cost of CMBS and unsecured funding. In practice, the cost of long-term financing would increase more slowly as only a small portion of the total funding needs to be refinanced in any given year. In the context of a nine-year projection model, however, assuming these more modest costs understates the likely impact of a funding shock on investor confidence and on long-term earnings projections. Showing the impact on an immediate basis provides a more realistic depiction of NewCo's likely financial health in a down cycle. Assuming the higher 300 basis point spread and funding needs equal to 90% of NewCo's assets, the net interest margin falls from 263 basis points to below zero in the stress case, pushing NewCo into a loss position.

In addition to the cost of funding, we incur various additional expenses:

- Credit losses: We assume base case realized credit losses of 25 basis points per annum. These losses rise by a factor of four to 100 basis points in stressed years, producing average over the cycle losses of 50 basis points per annum. The model follows GAAP by assuming provision expense necessary to maintain an ALLL of 1.5% of gross loans (actual credit losses are deducted from the ALLL), but the assumed ALLL rises to 4.5% in the down cycle.

- Servicing expenses: Under its current model, Multifamily's lender partners are responsible for collecting payments from borrowers, processing the payments and conveying the resulting cash to Fannie Mae. Multifamily then administers the MBS and processes payments to investors. The securitization agreements include a servicing fee payable to Multifamily's lenders that compensates them for their performance as servicer as well as for the risk they take under the loss sharing arrangement. As described above, for purposes of the analysis we assume a 12 basis point servicing fee to our lenders purely to cover their servicing obligations. To the extent NewCo's stand-alone capital requirements recognize the assumption of risk by NewCo's DUS lenders, NewCo would maintain the current DUS loss sharing structure and pay higher servicing fees as compensation. Lender risk sharing can be accomplished with little difficulty if NewCo retains the first loss risk in its securitizations.

- Other administrative expenses: In preparing this analysis, Multifamily's Finance and Accounting teams, assisted by Ernst & Young, have done extensive work on the nature of NewCo's potential cost structure and key drivers. In particular, we have evaluated what would be required to operate a business with a much smaller volume of originations, and to administer the Legacy Book on behalf of Fannie Mae. Managing the portfolio would impose sizeable demands in terms of personnel and infrastructure. We are therefore assuming a significant initial fixed cost base of $125 million per annum. Expenses then grow modestly over time with the additional cost of administering new loans being partially offset by the reduced cost of administering a declining Legacy Book.

- Taxes: As a stand-alone entity, NewCo would be a full taxpayer; we are assuming a combined federal, state & local tax rate of 35%.

In NewCo's early years, spread income from the loan portfolio must be supplemented by asset management fees from Fannie Mae to cover the high fixed cost base NewCo would need to retain to service the Legacy Book. A fee of five basis points per annum is broadly in line with precedents, and would produce approximately $100 million of revenue in the first year of operations. These revenues would decline as the Legacy Book amortized, but would be offset by growth in revenue from the new portfolio.

We assume minimal interest revenue from the liquidity portfolio of cash and short-term securities (yielding only 1% per annum). This portfolio is assumed to be funded by long-term unsecured borrowings with an assumed base case yield of 4% per annum. The resulting "negative carry" of 300 basis points is a modest offset to base case profitability. In the stress case, the cost of unsecured funding is assumed to rise by an additional 300 basis points, with the additional negative carry further reducing net interest income.

C. Summary balance sheet projections

Figure 36 shows the projected balance sheet for NewCo. As mentioned above, gross loan balances grow to approximately $46 billion by year seven, funded by approximately $43 billion in warehouse borrowings and long-term CMBS. The liquidity portfolio and related unsecured debt grow to approximately one billion dollars over the same period.

Figure 36: Projected Balance Sheet

($ in millions)

Balance Sheet	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
ASSETS									
Cash & securities	$211	$428	$655	$894	$1,150	$1,429	$1,453	$1,502	$1,544
Mortgage loans:									
Total loans held for sale	–	–	–	–	–	–	–	–	–
Total loans held for investment	6,831	13,853	21,172	28,906	37,195	46,205	48,451	50,098	51,482
Less: Allowance for loan losses	(102)	(208)	(318)	(434)	(558)	(693)	(2,180)	(2,254)	(2,317)
Total net loans held for investment	6,729	13,645	20,854	28,472	36,637	45,512	46,271	47,843	49,166
Total mortgage loans	6,729	13,645	20,854	28,472	36,637	45,512	46,271	47,843	49,166
Accrued interest receivable	21	43	65	89	115	143	145	150	154
Acquired property	25	50	76	104	134	167	169	175	180
Other assets	56	114	175	238	307	381	387	401	412
Total Assets	**$7,042**	**$14,281**	**$21,825**	**$29,798**	**$38,344**	**$47,632**	**$48,426**	**$50,072**	**$51,455**
LIABILITIES & SHAREHOLDERS' EQUITY									
Liabilities:									
Accrued interest payable	$19	$38	$59	$80	$103	$128	$135	$141	$147
Debt:									
Secured	6,056	12,281	18,769	25,625	32,974	40,961	41,644	43,059	44,249
Unsecured	263	534	815	1,113	1,432	1,779	3,300	4,069	4,846
Warehouse funding	–	–	–	–	–	–	–	–	–
Total debt	6,319	12,814	19,584	26,738	34,406	42,741	44,944	47,128	49,095
Stockholders' equity									
Preferred equity	–	–	–	–	–	–	–	–	–
Common Stock	735	1,396	1,991	2,528	3,017	3,468	3,468	3,468	3,468
Retained earnings	(31)	33	192	452	817	1,296	(121)	(666)	(1,255)
Total stockholders' equity	704	1,428	2,183	2,980	3,834	4,763	3,347	2,802	2,213
Total liabilities and equity	**$7,042**	**$14,281**	**$21,825**	**$29,798**	**$38,344**	**$47,632**	**$48,426**	**$50,072**	**$51,455**
Equity detail									
Common equity	$704	$1,428	$2,183	$2,980	$3,834	$4,763	$3,347	$2,802	$2,213
% of assets	*10.0%*	*10.0%*	*10.0%*	*10.0%*	*10.0%*	*10.0%*	*6.9%*	*5.6%*	*4.3%*
Total required capital (10% of assets)	$704	$1,428	$2,183	$2,980	$3,834	$4,763	$4,843	$5,007	$5,146
Surplus (shortfall)	–	–	–	–	–	–	(1,496)	(2,205)	(2,933)

Source: Fannie Mae.

D. Summary income statement projections

Figure 37 shows the projected income statement for NewCo. After losing money in the first year based on provision expense, NewCo is profitable until the onset of the modeled downturn. The company reaches a peak GAAP return on equity of approximately 11% in year six.

Figure 37: Projected Income Statement

($ in millions)

Income statement	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
Interest income									
Interest income on loans HFI	$134	$495	$867	$1,258	$1,673	$2,120	$2,458	$2,563	$2,644
Interest income on warehouse portfolio	45	47	50	53	58	64	21	17	16
Interest income on cash and securities	1	3	5	8	10	13	14	15	15
Total interest income	180	545	923	1,319	1,741	2,197	2,493	2,595	2,675
Interest expense									
Interest expense on warehouse funding	(23)	(24)	(26)	(28)	(30)	(33)	(23)	(19)	(17)
Interest expense on secured debt	(59)	(224)	(395)	(574)	(764)	(969)	(2,336)	(2,400)	(2,476)
Interest expense on unsecured debt	(5)	(16)	(27)	(39)	(51)	(65)	(178)	(259)	(313)
Interest expense	(87)	(264)	(448)	(640)	(845)	(1,066)	(2,537)	(2,677)	(2,806)
Net interest income	93	280	475	679	896	1,130	(44)	(82)	(130)
Loan loss provisions	(111)	(131)	(154)	(179)	(207)	(239)	(1,961)	(567)	(570)
Servicing expenses	(4)	(12)	(21)	(30)	(40)	(50)	(57)	(59)	(61)
Other administrative expenses									
Fixed	(125)	(125)	(125)	(125)	(125)	(125)	(125)	(125)	(125)
Variable	(4)	(8)	(12)	(17)	(22)	(29)	(31)	(33)	(36)
Total administrative expenses	(133)	(145)	(158)	(172)	(187)	(204)	(213)	(218)	(222)
Fee income from legacy book	104	93	82	71	60	49	38	27	16
Income before taxes	(47)	97	245	399	562	736	(2,179)	(839)	(906)
Taxes	17	(34)	(86)	(140)	(197)	(258)	763	294	317
Net Income	($31)	$63	$159	$260	$365	$479	($1,416)	($545)	($589)
Key ratios:									
ROAA	**(0.87%)**	**0.59%**	**0.88%**	**1.01%**	**1.07%**	**1.11%**	**(2.95%)**	**(1.11%)**	**(1.16%)**
ROAE	**(8.7%)**	**5.9%**	**8.8%**	**10.1%**	**10.7%**	**11.1%**	**(34.9%)**	**(17.7%)**	**(23.5%)**
Yield on loans	5.24%	5.24%	5.24%	5.24%	5.24%	5.24%	5.24%	5.24%	5.24%
Yield on warehouse portfolio	5.24%	5.24%	5.24%	5.24%	5.24%	5.24%	5.24%	5.24%	5.24%
Yield on cash and securities	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Cost of warehouse funding	2.71%	2.71%	2.71%	2.71%	2.71%	2.71%	5.71%	5.71%	5.71%
Cost of secured debt	2.71%	2.71%	2.71%	2.71%	2.71%	2.71%	5.71%	5.71%	5.71%
Cost of unsecured debt	4.02%	4.02%	4.02%	4.02%	4.02%	4.02%	7.02%	7.02%	7.02%
Net interest margin	2.63%	2.63%	2.63%	2.63%	2.63%	2.63%	(0.09%)	(0.16%)	(0.25%)
Fee income from legacy book	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%
Servicing expenses	0.06%	0.09%	0.10%	0.10%	0.11%	0.11%	0.12%	0.12%	0.12%
Fixed admin expenses / size of portfolio	1.83%	0.90%	0.59%	0.43%	0.34%	0.27%	0.26%	0.25%	0.24%
Variable admin expenses / size of portfolio	0.05%	0.05%	0.06%	0.06%	0.06%	0.06%	0.06%	0.07%	0.07%
Total admin expenses / size of portfolio	1.94%	1.05%	0.75%	0.59%	0.50%	0.44%	0.44%	0.43%	0.43%
Provision for loan losses / average loans	3.25%	1.27%	0.88%	0.71%	0.63%	0.57%	4.14%	1.15%	1.12%
Net charge-offs / average loans	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	1.00%	1.00%	1.00%

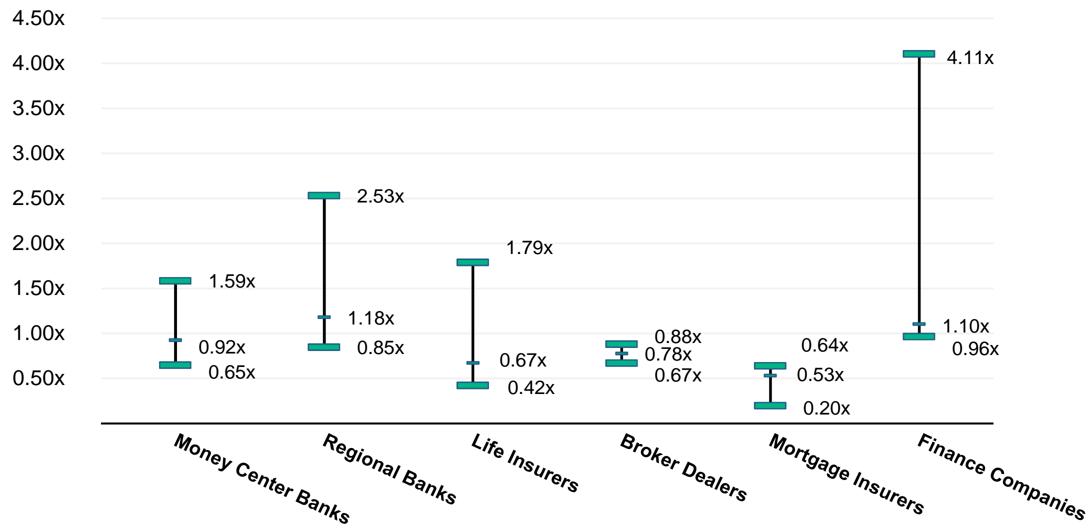
Source: Fannie Mae.

IX. FUNDING PLAN

A. Comparable companies and implied valuation

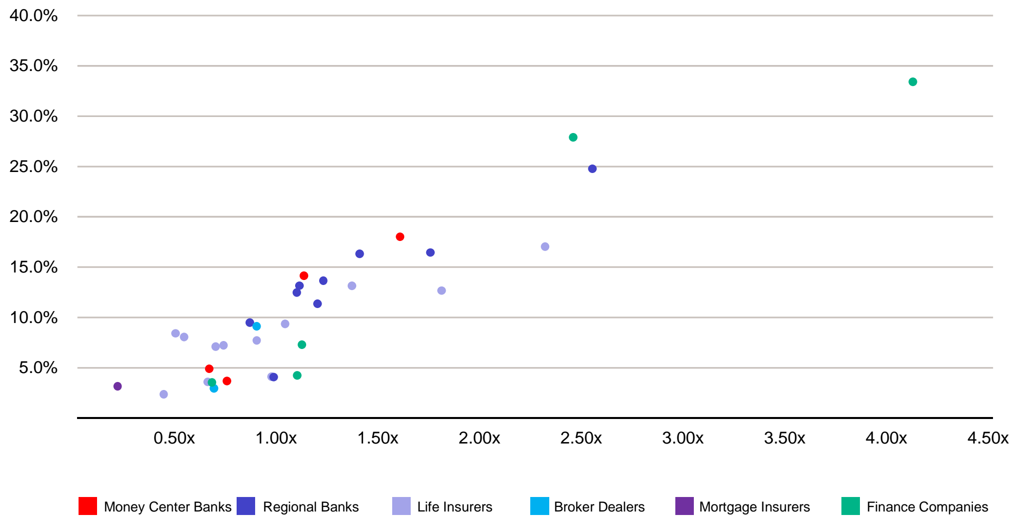
Figure 38 shows the valuations of publicly traded companies within different subsectors of the financial services industry. It highlights how valuations on even the most established names in the industry currently trade near 100% of tangible book value (i.e., a price-to-tangible book value of 1:1). Those companies that do trade at a material premium to book value typically generate much higher returns on equity - which, as explained below, is unlikely to be the case for NewCo. Figure 39 reflects the clear linear relationship between return on equity and valuation.

Figure 38: Comparable Company Analysis: Price-to-Tangible Book Value



Source: Company filings, SNL Financial and FactSet.
Note: Tangible book value as of Q3'2012. Prices as of 11/30/2012. Numbers represent maximums, medians and minimums.
See Figure 20 for the list of companies included in Money Center Banks, Regional Banks, Life Insurers, Broker Dealers, Mortgage Insurers and Finance Companies.

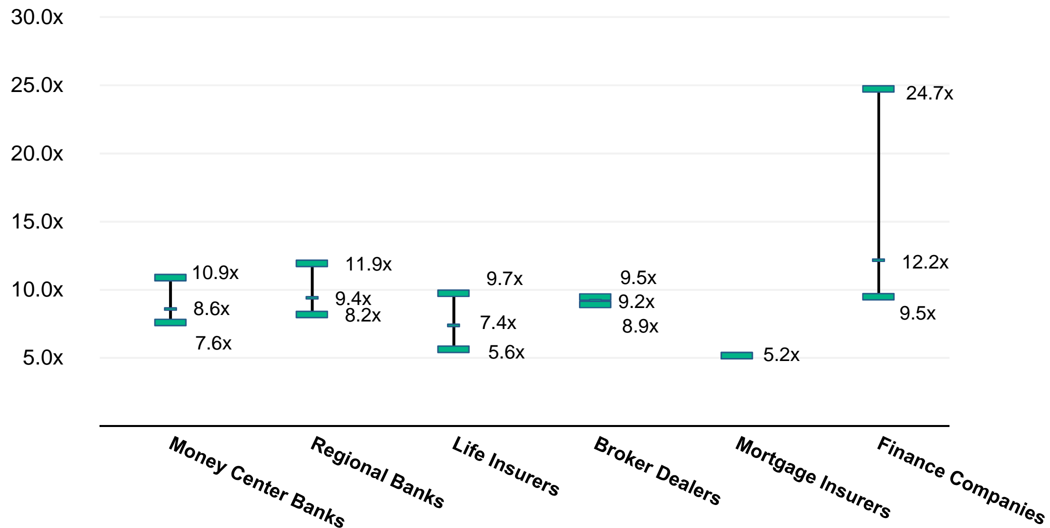
Figure 39: Return on Tangible Common Equity vs. Price-to-Tangible Book Value



Source: Company filings, SNL Financial and FactSet.
Note: Prices as of 11/30/2012. Numbers represent maximums, medians and minimums.
See Figure 20 for the list of companies included in Money Center Banks, Regional Banks, Life Insurers, Broker Dealers, Mortgage Insurers and Finance Companies

Of course, profitability is only one factor driving valuation – different earnings streams may be valued differently by investors. But, as shown in Figure 40, price-to-earnings multiples for financial services companies trade in a narrow band, typically somewhere between 8:1 and 10:1.

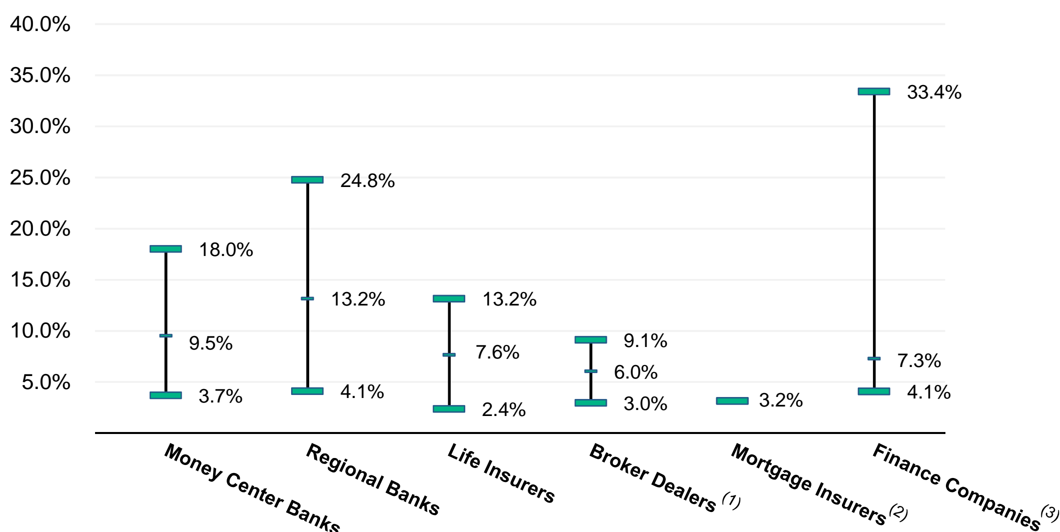
Figure 40: Comparable Company Analysis - Price-to-Next 12 Months Earnings



Source: Company filings, SNL Financial and FactSet.
Note: Prices as of 11/30/2012. Numbers represent maximums, medians and minimums.
See Figure 20 for the list of companies included in Money Center Banks, Regional Banks, Life Insurers, Broker Dealers, Mortgage Insurers and Finance Companies.

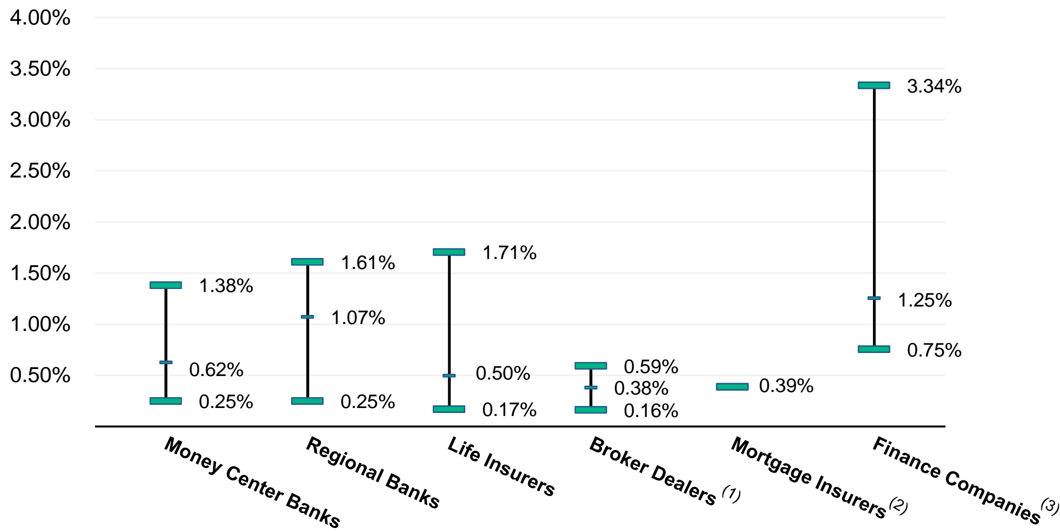
The greater variation in price-to-tangible book value multiples is a function of more significant disparities in profitability across companies. As shown above, in Figure 40, companies trading close to book value typically generate returns on equity in the low double digits, in line with our projections for NewCo. Figures 41 and 42 look at returns on equity compared to returns on assets. In the current low rate, low growth environment, few companies generate returns on assets in excess of 1%. Those that do tend to have less “balance sheet intensive” models and earn significant fee income relative to the amount of lending they do. Given an effective leverage cap of 9:1 or slightly higher, it is therefore impossible for most companies to earn a return on equity much above 10%.

Figure 41: Comparable Company Analysis - Return on Average Tangible Common Equity



Source: Company filings, SNL Financial and FactSet.
Note: Data as of Q3’2012. Numbers represent maximums, medians and minimums. Return on average tangible common equity based on last twelve months net income (“LTM”).
See Figure 20 for the list of companies included in Money Center Banks, Regional Banks, Life Insurers, Broker Dealers, Mortgage Insurers and Finance Companies.
(1) Morgan Stanley LTM net income adjusted for $1.6bn debt valuation adjustment.
(2) Mortgage Insurers only includes Genworth. Net income for MGIC Investment Group and Radian are not meaningful.
(3) CapitalSource LTM net income adjusted for $347mm DTA valuation allowance reversal. CIT LTM net income adjusted for $1.2bn in accelerated FSA net discount on debt extinguishments and repurchases and loss on debt extinguishments.

Figure 42: Comparable Company Analysis - Return on Average Assets



Source: Company filings, SNL Financial and FactSet.
Note: Data as of Q3'2012. Return on average assets based on last twelve months net income ("LTM").
See Figure 20 for the list of companies included in Money Center Banks, Regional Banks, Life Insurers, Broker Dealers, Mortgage Insurers and Finance Companies.

Given the valuations for comparable companies and reasonable expectations for potential returns, it would be unrealistic to assume a valuation for NewCo significantly higher than 100% of book value. Assuming a run-rate return on equity of approximately 12%, this implies a price-to-earnings multiple of approximately 8:1, also in line with comparable companies. The few names that trade at higher price-to-earnings multiples have a proven growth trajectory and modest credit or other balance sheet exposures. The nature of NewCo's business model is closer to "balance sheet intensive" sectors such as banking, and NewCo would be operating in a relatively mature market with significant political risk. We therefore see a high price-to-earnings ratio as unlikely, and higher returns as the only plausible route to a higher valuation in terms of price-to- book. Given that NewCo's cost structure and capital requirements are unlikely to be lower than assumed above, achieving a significantly higher return on equity would require even higher yields on NewCo's loan portfolio. Higher yields, however, would further undermine NewCo's ability to compete with other lenders, reducing its projected market share and increasing pressure on its cost structure.

Absent any practical way to achieve a premium valuation, there is no way to compensate Fannie Mae or the Treasury Department for giving up the franchise value and earnings power (currently running at more than $1 billion annually pre-tax, inclusive of earnings from the Legacy Book) associated with Multifamily. For example, if NewCo could sell shares at 200% of book value, it could raise 100% of its required book value while only selling half of the total shares. The remaining shares could be conveyed to Fannie Mae or Treasury and sold at a later date through one or more secondary transactions. But at a maximum valuation of 100% of book value, a company that has little existing common equity needs to sell close to 100% of its shares in order to raise

its required capital. There is therefore little residual ownership that can be provided to other stakeholders.

B. Alternative methods of raising private capital

Our base case expectation anticipates raising equity from public market investors. We reached this conclusion after considering the alternatives (a pure securitization strategy has already been addressed above):

- Private equity: Financial sponsors are capable of making significant investments, and have been seeking additional opportunities in financial services. We are skeptical, however, that they can anchor a capital raise for NewCo. The maximum commitment a private equity firm will make is generally well below $1 billion, so any transaction to capitalize NewCo would require a "club deal" with multiple parties needing to agree on key terms. More importantly, the returns demanded by financial sponsors are well in excess of those required by the public markets; this of course is their value proposition to their own investors.

- Mutual structures: Many of the GSE reform proposals circulating in the policy community advocate a "cooperative" model where originators collectively provide the capital to establish a guarantor or securitization utility. We do not believe this approach makes sense in the multifamily market where most of the independent originators lack the capital to invest in NewCo. The only existing customers with sufficient resources to provide this capital are the large banks, but they are unlikely to invest in NewCo since they would be able to finance loans more competitively on their own.

- Reinsurance: Multifamily's existing guarantor model is akin to an insurance company. We therefore considered whether the largest, best capitalized reinsurance companies might see value in taking exposure to the multifamily market. After analyzing the issue, we concluded this is not realistic. Credit risk is not a typical exposure for reinsurance companies. Even if they were comfortable with the risk, they would price that risk similarly to the way it is priced in the private label CMBS market. Consequently, there would be no advantage raising capital via reinsurance versus CMBS. One might argue that a reinsurance company should be able to leverage its exposure, a contingent liability, more than a "cash" investor such as a CMBS investor and, as a result, could price the risk more aggressively. That might be true; but allowing a reinsurance partner to leverage its exposure would leave NewCo exposed to the risk that the insurance company could not pay in the event of losses. In effect, NewCo would be replacing the exposure to the multifamily market with exposure to an insurance company. Alternatively, if the reinsurance company were required to maintain collateral, it would face the same liquidity costs as other investors.

C. Sizing the initial capital raise

NewCo's required capital grows as the outstanding balance of the loan and securities portfolios grows. That is, NewCo is assumed to raise equity as needed to maintain its 10% capital requirement. Initially, retained earnings do not keep pace with loan growth, and the capital needs grow in the first several years, reaching $3.5 billion in the sixth year (Figure 43). The equity market is assumed to be open in these years and capital is raised as needed. Assumed losses in years seven through nine, combined with additional growth in the portfolio, result in an equity shortfall of nearly $3 billion. But it is unlikely NewCo would be able to raise additional equity in this scenario, so it would need to operate with below target capital levels – if this is permitted by creditors.

Figure 43: Capital Requirements vs. Retained Earnings

Source: Fannie Mae.

A $3.5 billion IPO would fully eliminate the shortfall that accumulates in the upward phase of the cycle. But this capital raise would leave NewCo overcapitalized initially, with the excess capital only deployed over time as NewCo's portfolio grew. An initial IPO raise of $3 billion or more would certainly be possible given precedents, and there are benefits to raising the required capital in a single execution (e.g., investors know where the capital is coming from to fund the target balance sheet). But investors may demand a substantial premium for taking the risk on a new business model and an undefined balance sheet.

A more prudent strategy might be to pursue a smaller IPO (e.g., $1 billion) followed by subsequent primary raises as capital needs grow. That way, the remaining capital can be raised when there is more clarity as to the composition of the balance sheet and there is a track record of performance. But as noted above, at a valuation of approximately 100% of book value, both strategies require selling close to 100% of total shares outstanding in order to raise the required capital. This is unusual for the majority of IPOs, where only a fraction of the shares are typically sold (Figure 44). This anomaly occurs because companies typically have some level of existing book value prior to their

IPO, or are able to obtain a premium valuation. The circumstances with NewCo are more akin to those of the REITs that have recently gone public without having a balance sheet or capital. Since these offerings are also priced close to 100% of book value, they are required to sell 100% of their outstanding shares.

Figure 44: List of Recent U.S. Financial Institution IPOs

Pricing Date		Offering Size: Total Deal Value ($MM)	Offering Size: Implied Market Value ($MM)	Offering Size: IPO as Pct. of Market Value	Industry Subsector
Mar-08	Visa Inc.	$19,650	$44,320	44.3%	Miscellaneous
Jun-07	Blackstone	4,753	34,146	13.9	Asset Management
Jul-07	MF Global	2,921	3,589	81.4	Brokerage
Nov-07	Och-Ziff Capital	1,152	12,328	9.3	Asset Management
Aug-09	Starwood Property Trust	932	973	95.8	Mortgage REIT
Apr-11	Air Lease Corp	923	2,656	34.8	Specialty Finance
Jan-11	BankUnited	900	2,618	34.4	Banking
Feb-07	Fortress Investment Group	729	7,426	9.8	Asset Management
Sep-09	Artio Global Investors	719	2,035	35.3	Specialty Finance
May-12	Carlyle Group	671	6,699	10.0	Asset Management
Mar-11	Apollo Global Management	565	6,858	8.2	Asset Management
Jan-07	Employers Holdings	523	899	58.1	Insurance
Nov-10	LPL Investment Holdings	517	3,260	15.8	Brokerage
Nov-07	Chimera Investment Corp	511	554	92.2	Mortgage REIT

Source: Dealogic, Factset, company filings as of 11/30/12.
Note: Includes US FIG IPOs since 01/07/07, $500MM+.

A third alternative would be to have Fannie Mae or the U.S. Treasury provide a portion of the required capital, with their shares then sold at a later date through one or more secondary offerings. A structure of this kind would be more in line with precedents, both in the case of government-owned stakes in companies such as AIG and General Motors, and in sales of subsidiaries by private companies. It would also be the preferred strategy if the capital needs of NewCo are large relative to the capacity to raise equity in the market. But this is not an option we actively considered since FHFA has directed that we analyze a full sale with zero Fannie Mae ownership in order to avoid any suggestion of an ongoing guarantee. While a sale of 100% of the shares may be feasible, a sale of less than 100% would provide a better execution and potentially higher valuation, both on the IPO and on the subsequent sale of secondary shares.

X. IMPACT ON CUSTOMERS AND MARKETS

A. Lenders

The multifamily market and Fannie Mae's business model are distinguished by the presence of a relatively large number of independent originators. The market can exist in this fashion because the business is not particularly balance sheet intensive in terms of demanding large capital and liquidity resources. This is due to the role of the Enterprises and the liquidity provided by the DUS MBS execution and other Enterprise liquidity.

Were Multifamily to operate without a guarantee, customers would lose the ability to sell loans immediately at auction through the single-asset MBS structure. Instead they would face a much less liquid market for their loans, resulting in longer holding periods, greater interest rate risk, and a much less certain execution. But the impact of a less competitive market is less significant than the consequences of a general rise in secondary market interest rates. Multifamily's lenders would suddenly become much less competitive relative to banks, bank-owned CMBS conduits and insurance companies. They would lose customers, and the impact of a smaller volume of loans and greater competition for the remainder would likely drive many out of the business. The end result would be even further concentration of business in the hands of banks and other large financial institutions.

B. Borrowers

In the absence of the Enterprises or any other source of government guarantee, Borrowers would face a significant shock from the increase in required yields and the reduced availability of capital. Some would be unable to refinance and as a result would be forced into default. For others, the rise in rates would mean deferring or cancelling new projects. The impact of these shocks may be mitigated in the near-term by the current low level of interest rates, but would grow more pronounced when rates eventually rise.

Industry data also suggest that the Enterprises' role in the multifamily market has a demonstrably positive impact on rental housing values. The capitalization – or "cap" – rates[29] for apartment projects are lower than cap rates for other commercial real estate segments, such as hotels, office buildings, and industrial and retail developments. Investors appear willing to accept a lower cap rate for multifamily properties than for other real estate assets, at least in part, because of the stabilizing role played by the Enterprises and the attractive financing they provide.

Real Capital Analytics, Inc., a real estate data firm, reports that the average difference between multifamily cap rates and the weighted-average cap rates for other commercial real estate asset classes was 115 basis points between 2001 and 2011. A 115 basis point difference in cap rates on approximately $1.1 trillion of total multifamily real estate value amounts to $130 to $135 billion of incremental property value. Were this difference in cap rates to be eliminated, multifamily properties could decline in value by 10% or more relative to other commercial real estate. This is obviously important to property owners, but also to their rental customers.

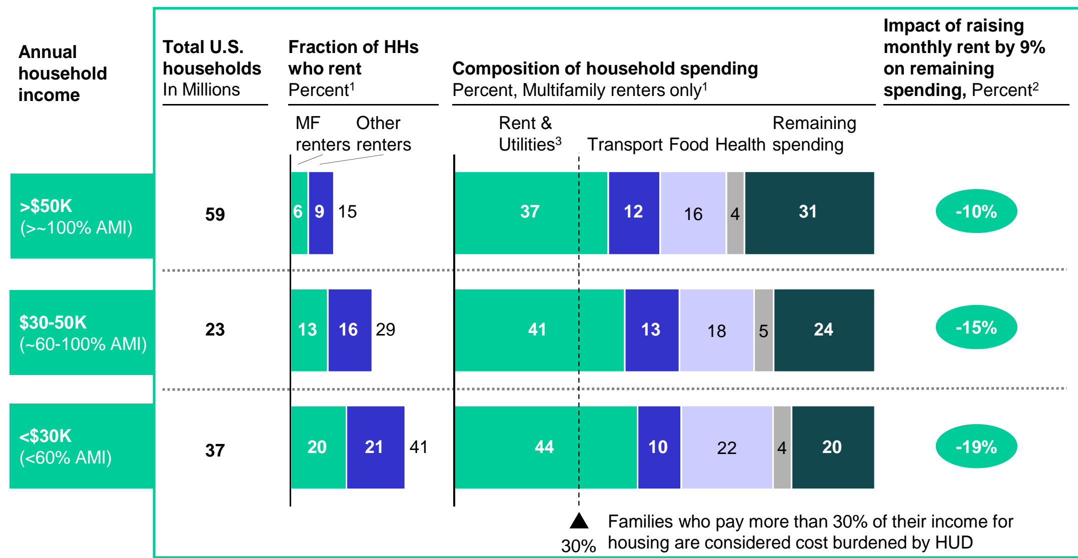
[29] A cap rate is the property's net operating income divided by the purchase price or estimated value. Net operating income is revenue from the property less expenses (before capital and financing costs). For example, if an investor buys a property with an annual net operating income of $80,000 and pays $1 million for the property, the cap rate is 8%.

C. Rental market

Persistently high unemployment, limited wage growth and the rising cost of healthcare, transportation and other necessities have dramatically raised the cost of living for lower income families. Young people are at particularly high risk given the growing magnitude of student loan debt. The problems afflicting these households can be seen clearly in the data. For example, HUD considers families who spend more than 30% of their income on housing to be "cost burdened." As shown in Figure 45, the average household served by Fannie Mae across a range of income levels spends well in excess of 30% of their income on housing-related expenses.

The required increase in loan yields resulting from the diminished role of the Enterprises in multifamily lending would have a significantly negative impact on the cash flows of multifamily property owners. They would look to source offsetting revenue (as well as to offset the negative impact of higher cap rates) by attempting to push rents significantly higher. This attempt to increase rents would be more successful at times, such as now, when vacancies and new construction are at relatively low levels. The impact of these changes would be felt most by the low- and moderate-income families already under significant financial pressure, as shown in Figure 45, and by tenants living in the areas least likely to attract alternative financing from banks and other lenders (e.g., outside of large coastal markets.)

Figure 45: Household Spending Patterns by Income Level



Source: Consumer Expenditure Survey (CES) Microdata, US Census Bureau 2010.
(1) Defined as renters in Garden, High rise or Apartment units in CES microdata
(2) Holding total expenditure constant, based on average rent for each category.
(3) Includes all costs of housing for multifamily.

XI. CONCLUSION

As directed by FHFA, Fannie Mae has carefully analyzed the viability of NewCo as a stand-alone entity operating without a government guarantee. For purposes of the analysis, we have applied FHFA's definition of "viability" – NewCo's capacity to raise initial equity capital in the private markets sufficient to fund its business. Of necessity, we have made a number of assumptions. In doing so, we have intentionally adopted those assumptions that we believe make the best reasonable case for NewCo's viability. Within the narrow constraints of the analysis, the answer to FHFA's question is yes, NewCo could be viable as a stand-along entity operating without a government guarantee -- at least in the short run and so long as the optimistic assumptions we have made are borne out. But in assessing NewCo's viability, we also modeled an explicit nine year business cycle under which many of these optimistic assumptions cease to apply. Our analysis suggests that even a mild downturn with increased credit losses and higher funding costs could weaken NewCo's capital position sufficiently to raise concerns about its ability to continue to operate. While NewCo might survive such a downturn, there is a strong possibility it would not.

In addition, given NewCo's lack of existing equity capital and any practical way to achieve a premium valuation in the current market, all proceeds from the sale of NewCo shares would be needed to capitalize NewCo's balance sheet. In other words, Fannie Mae and the Treasury Department would receive no consideration for the franchise value and earnings power of the existing Multifamily platform (the business currently generates over $1 billion annually in pre-tax earnings, inclusive of earnings from the Legacy Book). The only tangible benefit for taxpayers would be a gradual reduction in exposure to multifamily credit risk – and historical results suggest this risk is relatively modest. Perhaps more importantly, even if one assumes NewCo can be successfully separated and continue to survive, it would become a niche lender with a limited market share focused on higher risk credits. In short, NewCo would be just another specialty finance company, joining those already active in the market. As such, it is not clear what policy objective would be served by separating the business – or, more to the point, what policy objective that is not equally well met by shutting the business down and allowing the Legacy Book to run off. On the other hand, it is clear that the withdrawal of the government guarantee would have serious negative consequences for independent lenders, borrowers and the renters they serve. These adverse consequences would be particularly serious for underserved segments of the market, including those that currently benefit from mission-related affordable housing programs. The only parties that would appear to benefit from the creation of NewCo are the largest banks and other balance sheet lenders who would enjoy higher profit margins and an increased share of the multifamily market.