Fannie Mae: the Audacity of Growth

In our recent paper, *Fannie Mae's Trapped Profits Come into View*, we demonstrated that Fannie Mae common shares (FNMA) would be worth $7.11 if the net worth sweep were reversed. The valuation models in that paper extrapolated recent quarterly earnings figures, which include one-time legal settlements, securities gains, and credit related income, to arrive at an estimate for future earnings. In this paper, we will improve the accuracy of the earnings estimate by using the guaranty portfolios to model revenues and expenses. This will allow us to paint a more detailed picture of how Fannie's earnings will evolve in the future, and this in turn will allow for a more robust valuation assuming the third amendment were reversed. [Please refer to the important disclosure information at the end of this report.]

In order to understand Fannie's future earnings power, we first need to construct an estimate of normal earnings in one year. In the third quarter of 2014, Fannie Mae charged an average fee of 41.2 bps to guarantee Single-family mortgages. This average, however, includes fees related to the Temporary Payroll Tax Cut Continuation Act of 2011 (TCCA). If we exclude TCCA income, which is offset with an identical expense that is associated with mortgages originated between April 1, 2012 and January 1, 2022, the average guaranty fee was around 36 bps. We estimate that the average guarantee fee will be around 39 bps next year if Fannie continues to charge its current rate of 53.5 bps for new Single-family guarantees and the average mortgage life is seven years.[i] Next, Fannie estimates that the credit expense on its current Single-family portfolio is 4 bps and that operating expenses for the Single-family segment are running at 7 bps when measured against the guaranty portfolio. This gives a pretax operating margin of 28 bps, and since the GSEs only pay federal income tax, Fannie's Single-family segment will have a net income margin of 18.2 bps, or approximately $5.3 billion on $2.9 trillion, next year. We estimate the Multifamily segment makes $600 million a year by going through a similar analysis.

Fannie Mae's Capital Markets Group (CMG) segment currently has a mortgage portfolio of $438 billion. Fannie is required under the senior preferred stock purchase agreement to reduce its CMG mortgage portfolio by 15% a year until it reaches $250 billion. Hence, the portfolio will be about $372 billion in a year. In Q3 2014, the CMG (also known as Fixed Income Arbitrage) had net interest margins of approximately 1.75%. We estimate that the CMG also earns 10 bps in fees annually for engaging in structured transactions and other lending services and that operating expenses are 13 bps of the CMG portfolio. Thus, we estimate the CMG segment will make about 111.8 bps after-tax on its portfolio next year or approximately $4.5 billion [(($438+$372)/2)*.01118].

Based on these figures, our estimate for the current one-year earnings run rate is $10.4 billion. This earnings estimate is after-tax; note, however, that Fannie Mae has $42.8 billion of deferred tax assets on its balance sheet. Thus, the Company will not have to pay taxes on its next $122

[i] In Q3 2014, Fannie Mae charged an average Single-family guaranty fee of 63.5 bps. This includes an impact of a 10 bps increase from TCCA charges. From this point forward, references to Single-family guaranty fees will exclude TCCA fees.

billion in earnings. Given this, Fannie's current one-year earnings run rate excluding taxes is $16.0 billion we estimate.

In our estimate for run-rate earnings, the average Single-family guaranty fee is only 39 bps. This average, however, will rise over time as new mortgages are charged the higher fee rate. It is also likely that new guaranty fees will continue to rise above the current rate of 53.5 bps.[ii] If the average Single-family guaranty fee were increased to 60 bps, Single-family net earnings would be 31.9 bps [(60-4-7)*.65]. Multiplying 31.9 bps by the $2.9 trillion gives Single-family net earnings of $9.3 billion. Raising the Single-family guaranty fee to 80 bps increases Single-family net earnings to 44.9 bps or $13.0 billion on the current book of business. Solely by the act of raising the average guaranty fee by 20 to 40 bps, Fannie increases its earnings by $4 billion to $7.7 billion based on its current book of business and run-rate earnings would equal $14.4 billion to $18.1 billion.

The impact from higher guaranty fees increases with time due to growth in the Single-family guaranty portfolio. U.S. 1-4 family mortgage debt outstanding grew at annual rate of 9.2% from 1952 to 2014.[1] A reasonable estimate for future U.S. 1-4 family mortgage debt growth is the increase in average home prices plus population growth. From 1964 to 2014, the average sales price of houses sold in the U.S. increased by 5.8% annually and from 1952 to 2014, the U.S. population grew 1.1% annually.[2,3] A more conservative estimate is inflation plus population growth. From 1947 to 2014, inflation as measured by the GDP price deflator grew 3.2% annually.[4] Thus, we get estimates of 4.3% to 6.9% for growth in total U.S. 1-4 family mortgage debt outstanding. 6.9% may seem unrealistic; however, nominal GDP growth averaged 6.6% from 1947 to 2014 providing adequate financing for 6%+ mortgage debt growth.[5] To be conservative, however, we will use a maximum of 4.3% annual growth in the following valuations.

We also believe it is very likely that Fannie will continue to see reversals in its allowance for loan losses. Most of Fannie's current provisions are related to individually impaired loans that were made during the bubble years of 2005-2008. It is typical for losses to peak about five to seven years after origination. Hence, we believe it is likely that provisions will come down significantly in the next several years. From 1990 to 2007, Fannie Mae averaged 3 bps in credit losses per year on its Single-family guaranty. If we assume the average mortgage life is seven years, the reserve should be roughly 21 bps of its portfolio. The current reserve is 1.29% of the Single-family guaranty portfolio. Reducing it to 50 bps over the next five years, increases earnings by cumulative total of $20 billion. This figure has been added to our analysis and increases the per share value by $0.50 to $1.00.

Using the input estimates from above, we consider two possible scenarios given a reversal of the third amendment to value FNMA shares. In the first scenario, the excess dividend payments made to Treasury are returned to Fannie Mae and added to the common equity account. In this

[ii] Large and small banks will continue to invest in GSE securities well into the future due to favorable risk weightings giving to GSE MBSs and the GSEs will maintain pricing power against private label mortgage insurers due to scale, infrastructure, personnel, regulatory, and reputation advantages.

scenario, Fannie must build regulatory capital before repaying the senior preferred stock principal. In the second scenario, the excess dividend payments are treated as a return of principal and Fannie Mae is allowed to repay senior preferred principal before building regulatory capital. The second scenario is much more favorable to common shareholders because the Company does not have to pay senior preferred dividends while trying to build capital. This greatly reduces the number of years junior stakeholders have to wait until they receive distributions. There is unquestionably much uncertainty about the ultimate deal that will be struck between the Treasury and junior stakeholders if the third amendment is reversed. Nevertheless, we believe there is a very strong possibility that the GSEs will be able to refinance the senior preferred stock because the senior preferred stock certificates have a mandatory pay down of the liquidation preference upon issuance of new capital stock.[6,7] Moreover, we believe that the U.S. Government does not wish to continue to hold ownership stakes in private finance companies and will look to either sell the senior preferred shares or allow them to be refinanced.

In the first scenario, we estimate that it will take 24 years to first build capital and then repay the senior preferred stock if the Single-family guaranty portfolio grows by 4.3% annually, Single-family guaranty fees are 60 bps on new mortgages, and capital levels are 2.5%.[iii] In 25 years, the Single-family portfolio will be $8.2 trillion and earnings will be $26.0 billion (~$8.2 trillion times 31.9 bps). We assume the Multifamily guaranty portfolio also grows by 4.3% annually. This is conservative when compared to historical U.S. multifamily mortgage debt growth of 8.1% annually from 1952 to 2014.[8] The Multifamily portfolio is $570 billion in 25 years and earnings are $1.7 billion. CMG earnings should decline over the next three to five years as the Fixed Income Arbitrage portfolio is wound down. We assume that the portfolio declines to around $250 billion and then stays at 8.5%, which is approximately $250 billion divided by $3 trillion, of both guaranty portfolios. Thus, the CMG will make about 9.5 bps [((175+10-13)*.65)*.085] on both portfolios and earnings will be $8.2 billion in 25 years.

After building capital and paying off the senior preferred principal, Fannie will also have to pay about $1.6 billion in junior preferred dividends and make about $9.0 billion in regulatory capital investments. Therefore, cash flows to common equity holders will approximate $25.3 billion in 25 years. We believe 6.7% is an appropriate discount as this implies a P/E multiple of 15x, which is still lower than the current equity market multiple. The present value of cash flows under the first scenario with Single-family portfolio growth of 4.3% annually, Single-family guarantee fees of 60 bps, and capital levels of 2.5% discounted at 6.7% is $155.7 billion or $27.02 per share. If we increase Single-family guaranty fees to 80 bps, it takes 19 years to build capital and payoff senior preferred stock and the common shares are worth $44.79. Even if we raise the required capital level to 5% in the previous two valuations, the common shares are still worth $11.01 and $25.44.

If we are more conservative with growth by assuming the Single-family portfolio only increases by 3% annually, which is close to the assumption used in our previous analysis, *Fannie Mae's Trapped Profits Come into View*, it takes 25 years to build capital and pay off senior preferred

[iii] 2.5% capital may seem small, but remember the GSEs' pre-crisis minimum capital requirement was only 0.45%!

stock and the common shares are worth $16.93 with Single-family guaranty fees of 60 bps and 2.5% capital levels. If we raise the Single-family guaranty fee to 80 bps, it takes 20 years to pay off senior preferred shares and the common shares are worth $28.88. In summary, we believe FNMA shares are worth $27.02 in the first scenario or 12 times the current price range of $2.30 to $2.40.

In the second scenario when Fannie is allowed to first pay down the senior preferred principal, it takes fewer years to both pay off senior preferred shares and build capital. Now, it only takes 13 years to pay off the senior preferred shares and build capital with Single-family portfolio growth of 4.3% annually, 60 bps Single-family guaranty fees, and 2.5% capital levels. Here, the common shares are worth $37.48. If we raise Single-family guaranty fees to 80 bps, the common shares are worth $56.22 after waiting only 11 years before receiving distributions. Increasing capital to 5% causes the shares to fall to $18.16 and $34.76 in the previous two valuations as it now takes 23 and 18 years before distributions are paid to junior stakeholders. For scenario two, we again believe the most appropriate assumptions are at least 4.3% annual Single-family portfolio growth, 60 bps Single-family guarantee fees, and 2.5% capital or $37.48 per share.

From the above calculations, it is apparent that Fannie Mae's common shares will have significant value once the third amendment is reversed. In our previous paper, the crude estimate of Fannie Mae's earnings gave inaccurate future earnings and in our opinion was overly pessimistic based on historical data. By modelling the earnings using the guaranty portfolios, we can see that under conservative future U.S. housing market growth scenarios Fannie Mae's common shares are worth $27 to $37 or 12 to 16 times the current price depending on the eventual deal struck between Treasury and junior stakeholders.

A copy of the Fairlight spreadsheet valuation models is available upon request.

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All expressions of opinion are subject to change without notice, and the Authors do not intend to update or supplement the Report or any of the information contained herein.

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[1] Board of Governors of the Federal Reserve System (US), Mortgage Debt Outstanding by Type of Property: One-to Four-Family Residences
[2] US. Bureau of the Census, Average Sales Price of Houses Sold for the United States
[3] US. Bureau of the Census, Total Population: All Ages including Armed Forces Overseas
[4] US. Bureau of Economic Analysis, Gross Domestic Product: Implicit Price Deflator
[5] US. Bureau of Economic Analysis, Gross Domestic Product
[6] Epstein, R. (Sept. 10, 2014) *What Happens if the Government Loses on the Third Amendment? The Senior Preferred Stock Certificates Spell Nothing But Trouble For the Government.* Forbes
[7] Fannie Mae Preferred Stock Certificate, Section 4. *Mandatory Pay Down of Liquidation Preference Upon Issuance of Capital Stock*
[8] Board of Governors of the Federal Reserve System (US), Mortgage Debt Outstanding by Type of Property: Multifamily Residences