Grant Thornton Valuation and Calculation Methodologies
U.S. Treasury Department Preferred Stock Purchase Agreements
Fiscal Year 2012

The Grant Thornton valuation team intends to follow a methodology similar to that used in past years to perform the valuation of the common stock warrants and the senior preferred stock that Treasury acquired in the Preferred Stock Purchase Agreement (PSPA) of September 2008, as well as for the calculation of the remaining liquidity commitment on the PSPA.

The following are the key issues we have identified to date that may affect this year's valuations and the calculation:

- the unresolved issue surrounding the future of the GSEs[1];
- the effect on cash flows of the Temporary Payroll Tax Cut Continuation Act of 2011;
- whether and when the GSEs will return their deferred tax assets to their balance sheets;
- whether and when the GSEs will become taxpaying entities; and
- the effect on future cash flows of any principal forgiveness programs that might be implemented.

Valuation of the common stock warrants

We will employ the Black-Scholes (1973) method for valuing the warrants, which is the most widely accepted model for valuing stock options and warrants. Because of the nominal strike price ($0.00001), the warrants behave as if they were a grant of stock and will thus be priced just below the closing trading prices on the valuation date for each of the GSEs.

Any exercise of the warrants would result in substantial dilution of each of the GSEs' earnings, and consequently, of the GSEs' share prices. However, based on the substantial decline in the trading prices of Fannie Mae and Freddie Mac following the announcement of the PSPA on September 7, 2008, it remains our position that the common share prices already reflect the dilutive effect of the warrants.

While we will use the trading price of the common shares for valuing the warrants, because the warrants themselves are not traded on an active market, the valuation will require consideration of a blockage discount. Because of the large number of shares that must be sold, we will estimate the period of time it would take to dispose of the warrants without adversely affecting the market. The block discount will be determined by reducing the cash proceeds from the hypothetical sale of warrant shares over the holding period to a present value, and by

[1] As used herein, "GSE" refers to the two government-sponsored enterprises that are parties to the PSPA, namely the Federal National Mortgage Association, or Fannie Mae, and the Federal Home Loan Mortgage Corporation, or Freddie Mac.

the cost of put options to ensure that the share price at the valuation date is realized on each hypothetical sale during the holding period.

The large number of warrants represents a potential controlling interest in the GSEs. In the past we have considered whether there was a control premium that would increase the value of the warrants. However, no premium exists unless there is a benefit of control. Such benefits would include the ability to set company policy and to take actions that would influence the profitability of the business. These control prerogatives would not inure to a buyer of the PSPA warrants for the following reasons:

- The Federal Housing Finance Agency (FHFA), as the conservator, retains most of the usual management control powers.

- The GSEs act under a federal charter, which frequently places the GSEs' for-profit objectives in opposition to their requirements to serve as instruments of government policy.

- The GSEs have been required to implement housing policies that were mandated by Congressional acts to support emergency policy objectives following the 2008 collapse of the housing market.

Accordingly, we will not add a control premium to the value of the warrants.

<u>Calculation of the liquidity payments</u>
We will perform a calculation of the future liquidity payments required under the PSPA, which will be used as a disclosure in Treasury's financial statements. The basis for our calculation will be the short-term forecasts the GSEs' management provides to the conservator, along with GSE management's advice as to how to extend the estimates beyond the forecast period.

The GSEs provide three scenarios in their reports to FHFA – base, optimistic, and stress. We will compare past forecasts with actual results. Based on this comparison and our discussions with the GSEs' management and FHFA, we will determine an appropriate weighting to use for each scenario for this year's projections. In the past, we have concluded that it is most appropriate to assign a 100 percent weight to the base case. This is consistent with the intent of the assumptions underlying the FHFA request for a base case, which is to present a scenario describing the most likely outcome. After we receive the FHFA reports in September, we will determine whether this approach to weighting the scenarios continues to be the most appropriate method.

There continues to be widespread uncertainty with respect to the future of the GSEs. No oversight body with legislative or regulatory authority over the GSEs has yet publicly revealed a definitive plan for the ultimate future of the GSEs. However, Treasury and FHFA officials continue to make public reference to plans for a strategic wind down of the GSEs that will include simplifying and shrinking the GSEs' presence in the marketplace.

Valuation of the senior preferred shares

The stated value and the dividend of the senior preferred stock were not determined either by negotiation or by the customary interplay of preferred stock market participants. The stated value is one percent of $100 billion, which resembles a one percent commitment fee on a line of credit. The PSPA's ten percent cash dividend (or twelve percent payment-in-kind) was set at a time when no active market existed and outstanding preferred shares of Fannie Mae and Freddie Mac traded at yields higher than ten percent.

Treasury and the GSEs agreed that the $1 billion liquidation preference of the senior preferred stock for each GSE was part of the total consideration given by the GSEs for the initial $100 billion liquidity commitment and essentially represents an allocation into preferred stock from that total consideration rather than a value derived from any observable market inputs.

The senior preferred shares do not trade on an active market, nor is there a comparable financial instrument trading in the market. In accordance with accounting guidance, we must therefore construct a hypothetical transaction to provide a valuation of the senior preferred shares.

Our approach will be to consider the value of the dividends received by a potential purchaser over the estimated period of time the GSEs continue to operate. In the past, we have assumed that the GSEs will operate until they have exhausted their ability to draw on the Treasury's liquidity commitment to remain in a positive GAAP equity position. We expect to use the same methodology unless there are any significant policy announcements regarding the status of the GSEs or the PSPA.

The discount rate on the stream of cash flows is not readily available from observing the trading history of the GSEs' senior debt and preferred stock. The senior preferred stock effectively replaced the preferred stock in the third capital tranche, with the resulting downgrade. The following table illustrates the effect of the announcement of the PSPA on the ratings of each of the capital tranches for both GSEs:

	Pre-PSPA	Post-PSPA
Senior long-term debt	Aaa	Aaa
Subordinated long-term debt	Aa2	Aa2
Senior preferred stock	--	NR
Preferred stock	Baa3	Ca
Common stock	NR	NR

During the period of time that Treasury's commitment to the GSEs is unlimited, that is, through December 31, 2012, we will use a discount rate equivalent to the Treasury risk-free rate. For the period of time during which the GSEs are both unlikely to exhaust the liquidity commitment and to remain in their current form, we will use a riskier discount rate that reflects the average

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yield on financial service sector preferred shares. To reflect the vulnerability the GSEs face in an uncertain political and economic environment, we will apply a discount rate to the cash flows that is consistent with that of high yield, non-investment grade instruments, adjusted for tenor and the preferred tax benefit.