Filed Pursuant to Rule 433
Registration Statement No. 333-170374
Issuer Free Writing Prospectus, dated February 28, 2013
Relating to Prospectus, dated November 4, 2010,
Prospectus Supplement, dated December 1, 2011,
and Free Writing Prospectus, dated May 15, 2012

AMERICAN CAPITAL AGENCY CORP. FREE WRITING PROSPECTUS

This free writing prospectus is being filed pursuant to Rule 433 under the Securities Act of 1933 (the "Securities Act") with respect to Registration Statement No. 333-170374 (the "Registration Statement") filed by American Capital Agency Corp., a Delaware corporation (the "Company"), with the Securities and Exchange Commission (the "SEC") on November 4, 2010, the prospectus supplement, dated December 1, 2011 (the "Prospectus Supplement"), to the prospectus, dated November 4, 2010 (the "Base Prospectus"), included therein, and the free writing prospectus, dated May 15, 2012 (together with the Prospectus Supplement and the Base Prospectus, the "Prospectus").

To review the Prospectus, please click on each of the following links to the SEC's web site: http://www.sec.gov/Archives/edgar/data/1423689/000119312511327538/d258386d424b2.htm http://www.sec.gov/Archives/edgar/data/1423689/000142368912000033/fwp.htm

The Company has filed the Registration Statement with the SEC for the offering to which this communication relates. Before you invest, you should read the Prospectus in the Registration Statement and other documents that the Company has filed with the SEC for more complete information about the Company and this offering. You may get these documents for free by visiting EDGAR on the SEC web site at www.sec.gov. Alternatively, the Company, any underwriter or any dealer participating in the offering will arrange to send you the Prospectus if you request it by calling 212-829-4846 or 1-877-649-6848.

This free writing prospectus reflects the following updates to the Prospectus.

SUPPLEMENT TO FEDERAL INCOME TAX CONSIDERATIONS

The following summary of certain U.S. federal income tax considerations supplements the discussion set forth under the heading "Supplement to Federal Income Tax Considerations" in the Company's Free Writing Prospectus, dated May 15, 2012, and is subject to the qualifications set forth therein. The following summary is for general information only and is not tax advice. This discussion does not purport to deal with all aspects of taxation that may be relevant to particular holders of our common stock in light of their personal investment or tax circumstances.

EACH PROSPECTIVE STOCKHOLDER IS ADVISED TO CONSULT HIS OR HER TAX ADVISOR REGARDING THE SPECIFIC FEDERAL, STATE, LOCAL, AND FOREIGN INCOME AND OTHER TAX CONSEQUENCES TO HIM OR HER OF ACQUIRING, HOLDING, EXCHANGING, OR OTHERWISE DISPOSING OF OUR COMMON STOCK AND OF OUR ELECTION TO BE TAXED AS A REIT, AND OF POTENTIAL CHANGES IN APPLICABLE TAX LAWS.

Recently enacted legislation resulted in an increase in the highest marginal tax rates applicable to individuals and other non-corporate taxpayers. As of January 1, 2013, long-term capital gain (including capital gain dividends that we pay) and ordinary income (including dividends that we pay which are not capital gain dividends) are generally taxable at top marginal rates of 20% and 39.6%, respectively. The top tax rate on "qualified dividend income" received by U.S. stockholders taxed at individual rates is 20% but, with limited exceptions, our dividends are generally not eligible for taxation at such preferential rates, as described in "Supplement to Federal Income Tax Considerations-Taxation of Stockholders" in the Company's Free Writing Prospectus, dated May 15, 2012. We urge you to consult your tax advisors regarding the impact of this legislation on the purchase, ownership and sale of our common stock.

The following paragraph replaces the discussion set forth under the heading "Supplement to Federal Income Tax Considerations-Taxation of Stockholders-Taxation of Foreign Stockholders-Other Withholding Rules" in the Company's Free Writing Prospectus, dated May 15, 2012:

Legislation enacted in 2010 and existing guidance issued thereunder will require, after December 31, 2013, withholding at a rate of 30% on dividends in respect of, and, after December 31, 2016, gross proceeds from the sale of, our common stock held by or through certain foreign financial institutions (including investment funds), unless such institution

enters into an agreement with the Treasury to report, on an annual basis, information with respect to shares in, or accounts maintained by, the institution to the extent such shares or accounts are held by certain U.S. persons and by certain non-U.S. entities that are wholly or partially owned by U.S. persons and to withhold on certain payments. An intergovernmental agreement between the United States and an applicable foreign country, or future Treasury regulations or other guidance, may modify these requirements. Accordingly, the entity through which our common stock is held will affect the determination of whether such withholding is required. Similarly, after December 31, 2013, dividends in respect of, and after December 31, 2016, gross proceeds from the sale of, our common stock held by an investor that is a non-financial non-U.S. entity that does not qualify under certain exemptions will be subject to withholding at a rate of 30%, unless such entity either (i) certifies to us that such entity does not have any "substantial United States owners" or (ii) provides certain information regarding the entity's "substantial United States owners," which we will in turn provide to the Secretary of the Treasury. We will not pay any additional amounts to stockholders in respect of any amounts withheld. Non-U.S. holders are encouraged to consult their tax advisors regarding the possible implications of the legislation on their investment in our common stock.