Valuation Report

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Congressional Oversight Panel

DUFF & PHELPS

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Table of Contents

Table of Contents

APPENDIX - Volume I

Company Overviews

Table of Contents

APPENDIX - Volume II

Table of Contents

APPENDIX - Volume III (Technical Apendix)

Glossary of Terms

Glossary of Terms

ABCP	Asset-Backed Commercial Paper
ABS	Asset-Backed Security
Abu Dhabi	Entities representing the beneficial interests of HH Sheik Mansour Bin Zayed Al Nahyan, a member of the Royal Family of Abu Dhabi
ADIA	Abu Dhabi Investment Authority
AIG	American International Group, Inc.
AMLF	Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility
ARM	Adjustable Rate Mortgage
ARS	Auction Rate Security
Barclays	Barclays plc
Bear Stearns	Bear, Stearns & Co. Inc.
Berkshire Hathaway	Berkshire Hathaway Inc.
BEV	Business Enterprise Value
BofA	Bank of America Corporation
Boenning	Boenning & Scattergood, Inc.
CDO	Collateralized Debt Obligation
CDS	Credit Default Swap
Chrysler	Chrysler LLC
CIT	CIT Group Inc.
Citigroup	Citigroup Inc.
CLO	Collateralized Loan Obligation
CMBS	Commercial Mortgage-Backed Security
CMT	Constant Maturity Treasury
Countrywide	Countrywide Financial Corp.
CP	Commercial Paper
CPFF	Commercial Paper Funding Facility
CPI	Consumer Price Index
CPP	Capital Purchase Program
Credit Suisse	Credit Suisse Group
CSE	Consolidated Supervised Entity
Deutsche Bank	Deutsche Bank AG
DJIA	Dow Jones Industrial Average
Duff & Phelps	Duff & Phelps, LLC
EESA	Emergency Economic Stabilization Act of 2008

Glossary of Terms

EPS	Earnings Per Share
Fair Market Value	The price at which property would change hands between a willing buyer and a willing seller when neither is acting under compulsion and when both have a reasonable knowledge of the relevant facts.
FBR	Friedman, Billings, Ramsey Group
FDIC	Federal Deposit Insurance Corporation
FHLMC or Freddie Mac	Federal Home Loan Mortgage Corporation
FICO	Fair Isaac Corporation
FNMA or Fannie Mae	Federal National Mortgage Association
FPK	Fox-Pitt Kelton Cochran Caronia Waller
FRBNY	Federal Reserve Bank of New York
GAAP	Generally Accepted Accounting Principles
GAO	Government Accountability Office
GDP	Gross Domestic Product
GE	General Electric Corporation
GE Capital	General Electric Capital Corporation
General Motors or GM	General Motors Corporation
GNMA or Ginnie Mae	Government National Mortgage Association
Goldman	The Goldman Sachs Group Inc.
GSE	Government Sponsored Enterprise
IndyMac	IndyMac Bancorp Inc.
ISM	Institute for Supply Management
JPM	JPMorgan Chase & Co.
Ladenburg	Ladenburg Thalmann
LaSalle	LaSalle National Bank
Lehman	Lehman Brothers Holdings Inc.
LIBOR	London Interbank Offered Rate
LIHTC	Low Income Housing Tax Credit
LTM	Latest Twelve Months
MBS	Mortgage-Backed Security
Merrill Lynch	Merrill Lynch & Co., Inc.
Moody's	Moody's Investors Service
NCC	National City Corporation

Glossary of Terms

NCREIF	National Council of Real Estate Investment Fiduciaries
NYSE	New York Stock Exchange
OAS	Option Adjusted Spread
OAY	Option Adjusted Yield
OFS	Office of Financial Stability
Oppenheimer	The Oppenheimer & Co.
OTS	Office of Thrift Supervision
OTTI	Other-Than-Temporary Impairment
PDCF	Primary Dealer Credit Facility
PMI	Purchasing Managers Index
PNC	PNC Financial Services Group Inc.
PPI	Producer Price Index
Purchase Program Participants	Each of AIG, BofA, Citigroup, Goldman, JPMorgan, Morgan Stanley, PNC, USB and Wells Fargo
QFI	Qualified Financial Institution
Qualified Equity Offering	The sale by a QFI after the date of the CPP investment of Tier 1 qualifying perpetual preferred stock or common stock for cash
QSPE	Qualifying Special-Purpose Entity
RBC Capital	RBC Capital Markets Corporation
RMBS	Residential Mortgage-Backed Security
S&P	Standard & Poor's Rating Services
SBA	Small Business Administration
SEC	U.S. Securities and Exchange Commission
SIV	Structured Investment Vehicle
SPE	Special Purpose Entity
SPV	Special Purpose Vehicle
SSFI	Systemically Significant Failing Institution Program
Subject Investment	TARP Preferred Stock and TARP Warrants
TAF	Term Auction Facility
TALF	Term Asset-backed Securities Loan Facility
TARP	Troubled Asset Relief Program
TARP Preferred Stock	Preferred stock acquired by the U.S. Treasury Department under the Troubled Asset Relief Program

Glossary of Terms

TARP Warrants	Warrants acquired by the U.S. Treasury Department under the Troubled Asset Relief Program
T-bills	U.S Treasury Bills
TED	Treasury-Eurodollar
TIP	Targeted Investment Program
TLGP	Temporary Liquidity Guarantee Program
Treasury	U.S. Treasury Department
TRUP	Trust Preferred Stock
UBS	UBS AG
U.K.	United Kingdom
U.S.	United States
USB	U.S. Bancorp
U.S. Trust	U.S. Trust Corporation
VIE	Variable Interest Entity
VIX	Chicago Board Options Exchange Volatility Index
Wachovia	Wachovia Corporation
Washington Mutual	Washington Mutual Inc.
Wells Fargo	Wells Fargo & Company
William Blair	William Blair & Company, L.L.C.
YTD	Year-to-Date

I. Executive Summary

Executive Summary

A. Introduction

Duff & Phelps has been engaged by the Congressional Oversight Panel for Economic Stabilization to estimate the Fair Market Value of certain preferred stock securities and warrants of the Purchase Program Participants acquired by the Treasury through various TARP programs under the EESA.

Duff & Phelps is a leading provider of independent financial advisory and investment banking services. Our business focuses on providing independent valuation analysis to a broad array of financial and non-financial clients. Duff & Phelps has no ownership interest in the debt or equity securities of any of the nine Purchase Program Participants. Duff & Phelps has from time to time been engaged to provide valuation and investment banking services to certain of the Purchase Program Participants (unrelated to the Subject Investments), none of which has had a material impact on the financial results of Duff & Phelps.

This report is organized into sections to (i) provide background and context for the environment under which we are undertaking our valuation analysis, (ii) summarize the terms of the Treasury's investments under the various TARP programs, (iii) describe the valuation methodologies utilized by Duff & Phelps and (iv) provide valuation analysis summaries for each of the Subject Investments.

Report Outline

In section II, we provide a review of financial markets and the economic environment leading up to the establishment of the TARP to provide context for our valuation analysis. We start with a timeline of events, beginning in the summer of 2007 and ending as of the date of this report. The timeline identifies significant events during the financial crisis and is followed by a summary of key economic and market indicators.

Section III provides an overview of the TARP and the programs under which the Treasury made its investments in the Purchase Program Participants. We also include summary term sheets associated with the Subject Investments.

Section IV includes a discussion of the valuation methodologies considered and utilized to determine our estimated range of Fair Market Values of the Subject Investments.

In sections V through XIII, we provide valuation analysis for each of the Subject Investments, including a summary of key assumptions for the methodologies utilized. We also summarize how we concluded our valuation ranges for the TARP Preferred Stocks and TARP Warrants, the application of appropriate discounts due to reduced marketability and, finally, an overall range of value for each of the Subject Investments.

Lastly, in section XIV, we provide a summary of our estimated valuation ranges for each of the Subject Investments. Supporting data, information and supplemental analysis are included in the appendix.

B. Engagement Overview and Procedures

Engagement Overview

Duff & Phelps has been engaged by the Congressional Oversight Panel for Economic Stabilization to estimate the Fair Market Value of the Subject Investments as of their respective valuation dates (the date following their respective public announcement dates):

Subject Investments

Purchase Program Participant	Valuation Date	Investment Amount	TARP Program
American International Group, Inc.	11/10/08	$40.0	SSFI
Bank of America Corporation	10/14/08	$15.0	CPP
Citigroup Inc.	10/14/08	$25.0	CPP
Citigroup Inc.	11/24/08	$20.0	TIP
The Goldman Sachs Group, Inc.	10/14/08	$10.0	CPP
JPMorgan Chase & Co.	10/14/08	$25.0	CPP
Morgan Stanley	10/14/08	$10.0	CPP
The PNC Financial Services Group	10/24/08	$7.6	CPP
U.S. Bancorp	11/3/08	$6.6	CPP
Wells Fargo & Company	10/14/08	$25.0	CPP
	Total	**$184.2**	

Notes: $ in billions.

For purposes of our analysis, Fair Market Value is defined as the price at which property would change hands between a willing buyer and a willing seller when neither is acting under compulsion and when both have reasonable knowledge of the relevant facts. As such, our analysis attempts to address the question, "What price would a third party pay for the Subject Investments, given their terms, on their respective valuation dates?" Our analysis does not address what terms or price the Treasury should have or could have accepted, nor is it intended to evaluate policy objectives.

Procedures

All information utilized and considered by Duff & Phelps in its analysis for this report was obtained from public sources. The procedures undertaken to estimate the range of Fair Market Values for the Subject Investments included, but was not limited to, the following:

1. Analysis of the conditions in and the outlook for the financial services industry (as of the respective valuation dates);

2. Analysis of economic, governmental and investment data;

3. Analysis of the history, current operations and outlook of the Purchase Program Participants;

4. Analysis of publicly available data concerning both the Purchase Program Participants and the Subject Investments;

5. Consideration of appropriate valuation methodologies for the Subject Investments (see Section IV, Valuation Methodologies);

6. Development of models appropriate for each of the valuation methodologies relied upon in our analysis;

7. Review of the Securities Purchase Agreement–Standard Terms, form of Warrant and form of Certificate of Designations used for the Subject Investments; and

8. Analysis of other facts and data we deemed relevant to arrive at a range of Fair Market Values for the Subject Investments.

C. Valuation Methodologies Overview

The scope of Duff & Phelps' engagement is to estimate the Fair Market Value of the TARP Preferred Stock and the TARP Warrants as of the valuation dates for the respective Subject Investments. Since the TARP Preferred Stock and the TARP Warrants are not publicly traded, our fundamental approach to valuing these securities is to use data obtained from the public debt, equity and derivatives markets to estimate certain parameters, such as discount rates, volatility and default assumptions. All of the Purchase Program Participants have common stock that is publicly traded, and most of the Purchase Program Participants have debt and preferred securities that are publicly traded (see Appendix Volume II-C). In addition, CDSs for all but one of the Purchase Program Participants (PNC) are also publicly traded (see the Company Overviews of each Purchase Program Participant in Appendix Volume I-A through I).

Most issuers, investors and valuation practitioners believe that security prices determined in the financial markets provide the best indications of economic value. The turmoil in the financial markets leading to the TARP (outlined in section II), however, has created some concern that transaction prices are not always reliable indicators of fair values. To mitigate this concern, we have: (i) used several different valuation approaches; (ii) analyzed numerous publicly traded debt and preferred stock securities; and (iii) analyzed certain major market transactions which occurred during the relevant time period. In no case, however, do we attempt to assess whether the observed prices are consistent with other conceptions of fundamental value. The trading data for the publicly traded debt and preferred stock securities is in Appendix Volume II-A, C and D and the trading histories for CDS spreads are contained in the overviews of each Purchase Program Participant.

TARP Preferred Stocks

We utilized three methodologies to assess the value of the TARP Preferred Stocks:

1. Discounted Cash Flow Analysis Using Market Yields ("Yield-Based DCF Approach")

   The TARP Preferred Stocks are perpetual securities that are callable by the issuer after three years (earlier under certain conditions). Therefore, the holder of the TARP Preferred Stock (i) is long a perpetual security and (ii) is short (has sold or written) a call option on the perpetual security. In the Yield-Based DCF Approach, we valued each component by analyzing the observed yields on other publicly traded preferred and debt securities issued by the Purchase Program Participants. Therefore, this approach allows direct comparisons of the TARP Preferred Stocks with similar securities.

   We performed our valuation of the perpetual component of the TARP Preferred Stocks by discounting the contractual cash flows (dividends) at a discount rate that reflects the risk of each TARP Preferred Stock. The discount rate that we determined for each of the TARP Preferred Stocks is comprised of the 30-year CMT yield as of the valuation date plus a spread. We determined the appropriate spread from an analysis of the publicly traded preferred and debt securities of the Purchase Program Participants.

As we stated above, the publicly traded preferred securities are generally callable by the issuers. The call option is negative from the holder's perspective because the issuer of the security can call the security away from the holder, and presumably would do so when it is economical for the issuer and uneconomical for the holder. Thus, the call option lowers the value of the security and raises its indicated yield. The spreads that we observe, therefore, reflect the existence of call options. The size of this effect depends on the terms of each security. We adjusted the observed spreads to remove the call option effect, resulting in what is termed an "option-adjusted spread." In addition, a key difference that we adjusted for is the cumulative nature of the TARP Preferred Stocks versus the non-cumulative nature of most of the publicly traded preferred stocks.

We valued the call option (which is a negative value to the holder of the TARP Preferred Stocks) using methodologies that we describe in greater detail in Appendix Volume III-B.

2. Contingent Claims Analysis ("CCA Approach")

In CCA, a firm's securities can be modeled as derivative securities on its assets. In the simplest case, a firm has one debt instrument outstanding, which is zero coupon debt. Upon maturity, if the asset value exceeds the face value of debt, the residual value belongs to the equity holders. Therefore, the equity of the company can be valued as a call option on the assets of the company. The strike price of the option is the face value of the debt, and the maturity of the option equals the maturity of the debt.

CCA models can vary considerably in their complexity and implementation. In some cases, they are implemented using the Black-Scholes-Merton formula. This approach has several limitations. In particular, it assumes a fixed valuation term with no default prior to the end of that term. Alternative applications of CCA, for example, the work by Crosby and Bohn and Lucas and McDonald, employ Monte Carlo simulation, which we discuss in Appendix Volume III-D. This is a very flexible methodology that models behavior and tracks changes in value through simulated time. Our CCA valuation approach follows closely to that described by Lucas and McDonald.

3. Discounted Cash Flow Analysis Using Survival Probabilities Derived from CDS Spreads ("CDS-Based DCF Approach")

This approach is a DCF analysis using as its information base CDS rates. In this approach, the Fair Market Values of the TARP Preferred Stocks are estimated as the discounted sum of the adjusted cash flows. This valuation methodology utilizes CDS rates to estimate the adjustments to cash flows. These adjustments incorporate both the probability of default and the premium the market requires to bear default risk. Using CDS rates is attractive because the CDS market is highly liquid with readily available and reliable price data.

CDSs are contracts in which the buyer makes periodic payments (premium) to the seller. In return, the seller pays an amount that makes the buyer whole (protection) if the underlying instrument defaults. The premium is usually expressed as a "spread," a percentage of the notional amount of the underlying

instrument. Because the level of premium the CDS seller demands is a function of the risk of the underlying instrument, default probabilities can be implied by the level of CDS spreads observed in the market. See Appendix Volume III-C for a more complete discussion of the methodology.

We apply this methodology to the TARP Preferred Stocks with two important adjustments. First, preferred stock is likely to experience a lower recovery rate than debt on its face value in an event of default. Therefore, we have assumed a 0% recovery rate. Second, preferred stock can suffer a loss without an event of default if the company suspends dividends. To account for this possibility, we increased the CDS spreads.

We are not aware of a specific way to determine the amount by which a preferred spread should differ from a bond spread. Therefore, we calculated the estimated spread adjustment that would be necessary to produce values consistent with the results of our two other valuation methodologies. Thus, we did not utilize the CDS-Based DCF Approach to determine independent valuations; instead, we utilized it to assess the reasonableness of the valuation results from the other two methodologies.

Market Transactions

There were a number of private sector investments in U.S. financial institutions as well as transactions involving investments in non-U.S. financial institutions by private investors and governments of other countries during the period from June 2007 to October 2008. Several of the transactions involving U.S. financial institutions included certain Purchase Program Participants. These transactions are summarized in the following table:

Market Transactions

Subject Company / Investor	Announce Date	Transaction Amount (millions)	Securities
Countrywide / Bank of America	8/22/07	$2,000	convertible preferred stock
Fannie Mae / Institutional Investors	9/25/07	$1,000	preferred stock
Washington Mutual / Institutional Investors	10/25/07	$1,000	preferred stock
Citigroup / ADIA	11/26/07	$7,500	common stock and trust preferred stock
Morgan Stanley / China Investment Corporation	12/19/07	$5,579	common stock and trust preferred stock
Citigroup, Inc. / Government of Singapore Investment Corporation, Kuwait Investment Authority and others	1/15/08	£12,500	convertible preferred stock
Merrill Lynch / Kuwait Investment Authority, Mizuho Corporate Bank, and others	1/15/08	$6,600	convertible preferred stock
Washington Mutual / TPG and others	4/7/08	$7,200	common stock, preferred stock and warrants
Wachovia / Institutional Investors	4/14/08	$7,000	common stock and convertible preferred stock
National City / Corsair Capital LLC, TPG-Axon Capital Management, L.P., and others	4/20/08	$7,000	common stock, preferred stock and warrants
CIT / Institutional Investors	4/21/08	£1,500	common stock and convertible preferred stock
Goldman Sachs / Berkshire Hathaway	9/23/08	$5,000	preferred stock and warrants
Morgan Stanley / MUFG	9/29/08	$9,000	convertible and non-convertible preferred stock
Royal Bank of Scotland plc / U.K. Government and existing shareholders	10/13/08	£20,000	ordinary shares and preference shares
Lloyds TSB Group plc / U.K. Government and existing shareholders	10/13/08	£5,500	ordinary shares and preference shares
HBOS plc / U.K. Government and existing shareholders	10/13/08	£11,500	ordinary shares and preference shares
Barclays / Qatar Holding and Abu Dhabi	10/31/08	£7,050	mandatorily convertible notes, reserve capital instruments and warrants

Source: Capital IQ.

Duff & Phelps analyzed these transactions in the context of our overall valuation analysis of the TARP Preferred Stocks and TARP Warrants. While analyzing comparable transactions can often provide useful valuation insights, we believe that in the case of

the TARP Preferred Stocks and TARP Warrants there are certain limitations in the comparability of such transactions that should be noted. Specifically, with respect to the investments in U.S. financial institutions, comparability is limited since (i) they were completed before the adoption of the EESA on October 3, 2008, when the financial crisis was still developing and (ii) with the exception of the Goldman-Berkshire Hathaway and Morgan Stanley-MUFG transactions, they were completed well before October 2008, when the financial crisis became most serious and the Treasury and other governments took action. With respect to the investments in non-U.S. financial institutions, comparability is limited because the transactions resulted from government intervention, not arm's-length negotiations (other than the Barclays transaction).

Key Reference Transactions

The three transactions that we believe to be most relevant for purposes of our analysis are Goldman-Berkshire Hathaway, Morgan Stanley-MUFG, and Barclays-Qatar Holding and Abu Dhabi. The first two of these involved Purchase Program Participants, and all three of them occurred in the fall of 2008, after Lehman filed for bankruptcy and near the time of the initial announcements regarding the TARP investments.

We specifically analyzed these transactions in conjunction with our review of data obtained from the public debt, equity and derivatives markets. The purpose of this comparative analysis is to understand the difference between observed market prices and yields for publicly traded debt and preferred securities of the Purchase Program Participants versus the price paid by investors in these three private transactions. Based on our analysis of these three transactions, we believe Berkshire Hathaway and Qatar and Abu Dhabi negotiated prices that reflect significant discounts to prices suggested by publicly traded securities (for reasons discussed below); based on a similar analysis, we believe MUFG's investment in Morgan Stanley was priced near prices suggested by publicly traded securities. Given the limited number of similar sized relevant transactions, and the fact that in two of these three transactions the investors negotiated a premium price, it is our judgment that utilizing data obtained from the public debt, equity and derivatives markets is more appropriate for purposes of our valuation analysis.

These three transactions are more fully described and analyzed in Appendix Volume I-J; however, our conclusions are summarized below.

Goldman-Berkshire Hathaway

We estimated the value of Berkshire Hathaway's investment in Goldman, after application of appropriate discounts due to reduced marketability, to be at a 108% to 112% premium to the face value of the investment at the time the transaction was announced. We believe that the premium that Berkshire Hathaway was able to obtain is explained by the intangible benefit associated with Mr. Buffett.

Our view is that Berkshire Hathaway has a history of making investments at better-than-market pricing. For example, we note that on October 2, 2008, Berkshire Hathaway announced a $3 billion investment in GE. The investment in GE also included preferred stock and warrants on virtually the same terms as the Berkshire Hathaway investment in Goldman (notably, 10% dividend rate and warrants for 100% of initial

investment). Since market yields for GE debt and preferred securities were also well below 10% on October 2, 2008, we believe Berkshire Hathaway's investment in GE was also priced at a discount to a public market price.

We believe that Berkshire Hathaway is able to achieve terms that are unavailable to other private investors because of Mr. Buffett's history and reputation in the capital markets. In effect, Berkshire Hathaway is offering more than just capital; it is also selling the "Buffett" name as imprimatur on the viability of the entity receiving Buffett capital.

Barclays-Qatar Holding and Abu Dhabi

We estimated the value of Qatar's and Abu Dhabi's investment in Barclays, after application of appropriate discounts due to reduced marketability, to be at a 122% to 125% premium to the face value of the investment at the time the transaction was announced. We believe that the premium that Qatar and Abu Dhabi were able to obtain is explained, in part, by the intangible benefit of remaining independent of government ownership.

At the time of Qatar's and Abu Dhabi's investment in Barclay's, the U.K. government agreed to make available to eligible U.K. banks, new capital in the form of preferred shares and common stock. The rate offered on the preferred shares was 12% until five years after issue, at which time the rate would reset quarterly to 3-month LIBOR plus 7.0%. Regarding the common stock, the U.K. government would agree to backstop a new common stock offering to the participating bank's existing shareholders. Thus, the U.K. government would purchase any common shares not purchased by the participating bank's shareholders.

In spite of the cheaper capital available from the U.K. government, Barclays proceeded to raise more expensive private capital so it could remain independent of government ownership.

Morgan Stanley-MUFG

We utilized the same OAY to analyze the MUFG investment in Morgan Stanley as we used to value to the TARP investment in Morgan Stanley. Based on this analysis and after application of appropriate discounts due to reduced marketability, we estimated the value of MUFG's investment to be at a nominal discount to the face value of the investment at the time the transaction was announced (88% to 94% of face value).

TARP Warrants

For the valuation of the TARP Warrants, we utilized an options pricing approach implemented with a Monte Carlo simulation, which readily accommodates time-varying interest rates and volatilities and incorporates adjustments to value to account for the issuer's ability to cancel half of the warrants through a "Qualifying Equity Offering."

Thus, our options pricing model has the following embedded features:

1. American-style option;
2. Time varying volatility;
3. Time varying risk-free rate;
4. Dilution adjustment;
5. Dividend yield on common stock; and
6. Contingent cancellation of 50% of the TARP Warrants.

Reduced Marketability of the TARP Preferred Stocks and TARP Warrants

Our baseline valuations of the Subject Investments (using the methodologies summarized above) treat the TARP Preferred Stocks and the TARP Warrants as if they were readily marketable (as of the valuation dates). This follows directly from our fundamental valuation approach, which is based on the pricing of publicly traded securities. We believe that a hypothetical buyer of the Treasury's entire position in each of the TARP Preferred Stocks and TARP Warrants would discount those values to account for the reduced marketability of such large positions.

Thus, we applied a discount due to reduced marketability for the TARP Preferred Stocks and TARP Warrants. The amount of the discounts applied ranged from 5% to 10% for the TARP Preferred Stocks and 5% to 20% for the TARP Warrants.

D. Summary of Findings

The aggregate face amount of the ten Subject Investments analyzed in this report totals $184 billion. As summarized in the table below, we estimate the value of these investments (as of their respective valuation dates) to be in the range of $112 billion to $132 billion in the aggregate, which represents approximately 61% to 71% of the face value of the investments.

The range of value for each Subject Investment is the result of the low and high values derived from the Yield-Based DCF Approach and the CCA Approach previously described and more specifically discussed in each of the company valuation summaries in sections V though XIII.

Valuation Summary*

Purchase Program Participant	Valuation Date	Investment Amount	Total Estimated Value* of Preferred and Warrants			Total Estimated Value* of Preferred and Warrants as % of Face Value		
			Low		High	Low		High
American International Group, Inc.	11/10/08	$40.0	$14.2	to	$15.4	36%	to	38%
Bank of America Corporation	10/14/08	$15.0	$11.6	to	$13.3	77%	to	89%
Citigroup Inc.	10/14/08	$25.0	$14.2	to	$16.8	57%	to	67%
Citigroup Inc.	11/24/08	$20.0	$8.3	to	$11.7	41%	to	59%
The Goldman Sachs Group, Inc.	10/14/08	$10.0	$6.8	to	$8.2	68%	to	82%
JPMorgan Chase & Co.	10/14/08	$25.0	$19.0	to	$22.2	76%	to	89%
Morgan Stanley	10/14/08	$10.0	$4.7	to	$6.8	47%	to	68%
The PNC Financial Services Group	10/24/08	$7.6	$5.2	to	$5.8	69%	to	77%
U.S. Bancorp	11/3/08	$6.6	$5.9	to	$6.7	89%	to	102%
Wells Fargo & Company	10/14/08	$25.0	$21.7	to	$24.6	87%	to	99%
Total		**$184.2**	**$111.7**	**to**	**$131.6**	**61%**	**to**	**71%**

Notes: $ in billions. All values are after applicable discounts due to reduced marketability.

* as of the respective valuation dates.

E. Assumptions, Qualifications and Limiting Conditions

1. The information utilized in preparing this presentation was obtained from a wide array of public sources. No representation or warranty, expressed or implied, is made as to the accuracy or completeness of such information and nothing contained herein is, or shall be relied upon as, a representation, whether as to the past or the future. Duff & Phelps did not attempt to independently verify such information and we have relied upon the accuracy and completeness of all the information reviewed by us and have assumed such accuracy and completeness for purposes of rendering this report. Furthermore, Duff & Phelps has assumed that no other assets or liabilities exist for the Purchase Program Participants beyond those identified in public filings. We have also assumed that there has been no material change in the assets, financial condition, results of operations, business or prospects of the Purchase Program Participants since the date of the then-most recently publicly available financial statements of each of such Purchase Program Participant available at or prior to the valuation dates for the respective Subject Investments.

2. Our valuation analysis for the Subject Investments are based upon Duff & Phelps' independent assessment of general economic, financial and market conditions as they existed and could be evaluated by Duff & Phelps as of the valuation dates for the respective Subject Investments. Events occurring after the valuation dates for the respective Subject Investments could materially affect our analysis and value ranges. We have not undertaken, and we have no obligation, to update, revise or reaffirm this report or otherwise comment upon events occurring after the valuation dates for the respective Subject Investments. We are expressing no opinion herein as to the prices at which any of the securities of any of the Purchase Program Participants may trade at any time.

3. This report does not evaluate, value or opine on the underlying business or policy decision of the Treasury to make investments in any of the Subject Investments. The Treasury may have taken into account non-financial or other factors unrelated to the specific financial analysis performed by Duff & Phelps. This report does not attempt to include the value, if any, of such non-financial or other factors in estimating the ranges of Fair Market Values of the Subject Investments.

4. No selected company, selected security or selected transaction used in our analysis is exactly comparable to the Purchase Program Participants or the Subject Investments.

5. This report or any results of Duff & Phelps' services shall not constitute a solvency opinion, fairness opinion or credit rating and may not be relied upon by you or any other party as such. Duff & Phelps did not independently evaluate any of the Purchase Program Participants' solvency or make an independent evaluation, appraisal or physical inspection of any specific assets, the collateral securing assets or the liabilities (contingent or otherwise) of the Purchase Program Participants or any of their respective subsidiaries, nor have we been furnished with any such evaluations or appraisals of any of the Purchase Program Participants' specific assets or liabilities (contingent or otherwise).

6. Duff & Phelps did not independently investigate any legal or regulatory matters involving any of the Purchase Program Participants.

7. We have assumed that public markets are efficient in the sense that all market participants receive and act on all relevant information as soon as it becomes available. Additionally, we have assumed that an investor in the Subject Investments would exhibit value-maximizing behavior.

8. We recognize there is diversity in how certain firms may apply FAS 157: Fair Value Measurement for financial reporting and we have made no determinations with regard to any of the Purchase Program Participants' methodologies or disclosures.

9. By its very nature, valuation work cannot be regarded as an exact science and the conclusions in many cases will of necessity be subjective and dependent on the exercise of individual judgment.

10. Duff & Phelps has not been requested to, and did not (a) conduct any discussions with the management of the Purchase Program Participants (b) negotiate the terms of the Subject Investments or (c) advise the Treasury, the Purchase Program Participants or any other party with respect to alternatives to the Subject Investments.

11. Duff & Phelps' report (a) does not address the merits of the underlying decision by the Treasury to enter into the Subject Investments and (b) does not create a fiduciary duty on Duff & Phelps' part to any party.

12. The analysis and conclusions presented in this report apply to this engagement only and may not be used out of the context presented herein. This report is valid only for the effective date specified herein and only for the purpose specified herein. This report may not be used for any purpose by any person other than the Congressional Oversight Panel for Economic Stabilization in its evaluations and recommendations regarding the Treasuries investments in the Subject Investments.

II. Review of the Financial Markets and Economic Environment

Review of the Financial Markets and Economic Environment

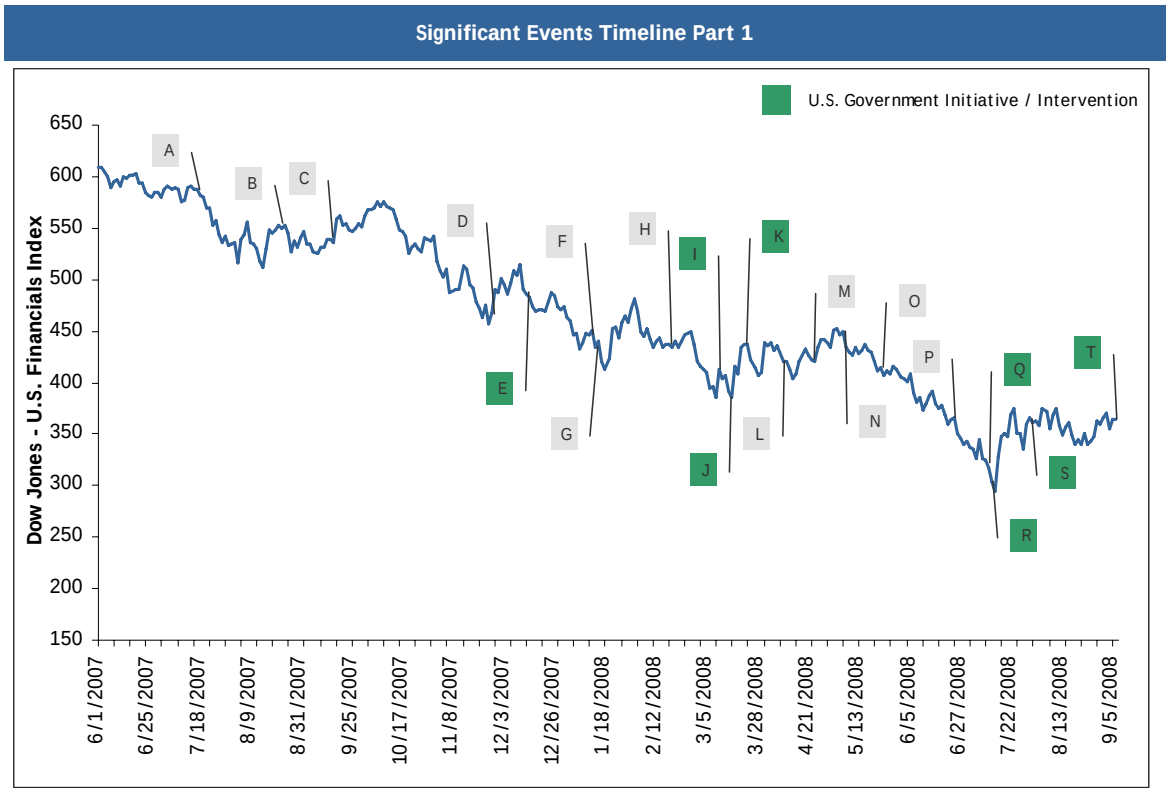
A. Timeline of Significant Events

The financial crisis that emerged over a year ago escalated in September and October of 2008 with several dramatic shifts across global markets resulting in unprecedented government interventions. The dramatic U.S. housing market correction ultimately caused the U.S. government to place Fannie Mae and Freddie Mac in conservatorship on September 7, 2008.

This conservatorship action was followed by a series of extraordinary government interventions, bank failures and significant market downturns. Among the most significant U.S. government interventions was the enactment of the EESA, which established the TARP, a $700 billion rescue plan authorizing the Treasury to purchase and insure certain types of troubled assets for the purposes of providing relief to the economy and the financial system.

In this section we explore several of the notable events from June 1, 2007 leading up to the bailout of Fannie Mae and Freddie Mac and select significant events that ensued. The timeline is followed by a summary of key economic indicators in section B and key market indicators in section C.

Dow Jones U.S. Financials Index
June 1, 2007 through September 7, 2008



Source: Dow Jones U.S. Financials Index pricing data provided by Capital IQ.

A.) July 17, 2007 – In a letter sent to investors, Bear Stearns Asset Management reported that its Bear Stearns High-Grade Structured Credit Fund had lost more than 90% of its value, while the Bear Stearns High-Grade Structured Credit Enhanced Leveraged Fund had lost virtually all of its investor capital. The larger Structured Credit Fund had lost around $1 billion, while the Enhanced Leveraged Fund, which was less than one year old, had lost approximately $600 million of investor capital. Bear Stearns relayed to investors that both funds had significant subprime mortgage exposure. *Source: Bloomberg.*

B.) August 24, 2007 – BofA announced a $2 billion investment in preferred shares of Countrywide, the largest U.S. mortgage lender at the time. The preferred shares, paying a 7.25% annual dividend and convertible into common voting stock at $18 per share, resulted in BofA owning a 16% stake in Countrywide, which had seen its share price decline after it lost access to one of its traditional sources of liquidity, the commercial paper market. *Source: Financial Times.*

C.) September 14, 2007 – The Bank of England extended emergency funding to Northern Rock, a large British mortgage lender. The rescue came after investors withdrew support of Northern Rock amid worries that the institution

could face short term difficulties in raising needed capital in the wholesale market. *Source: Financial Times.*

D.) November 26, 2007 – Citigroup announced an agreement to sell equity units, with mandatory conversion into shares of Citigroup common stock, in a private placement to ADIA in the amount of $7.5 billion. ADIA's aggregate ownership in Citigroup's common shares, including the conversion of these equity units, would total no more than 4.9% of Citigroup's total shares outstanding. *Source: Citigroup Press Release.*

E.) December 12, 2007 – The Federal Reserve, the European Central Bank, the Bank of England, the Bank of Canada and the Swiss National Bank committed to injecting more liquidity into financial markets and accepting wider collateral from commercial banks in return for central bank funds. The coordinated effort by the world's central banks was agreed upon at the November 2007 G-20 meeting, a meeting of the world's twenty largest economies. Under the TAF program, the Federal Reserve announced it would auction term funds to depository institutions against the wide variety of collateral that can be used to secure loans at the discount window. The Federal Reserve also entered into currency swap arrangements with the European Central Bank and Swiss National Bank to provide $24 billion to continental European central banks. *Source: Financial Times.*

F.) January 11, 2008 – BofA announced a definitive agreement to purchase Countrywide in an all-stock transaction worth approximately $4 billion. The purchase would make BofA the nation's largest mortgage lender and loan servicer. The transaction received regulatory and shareholder approval and closed on July 1, 2008. *Source: Bank of America Press Releases.*

G.) January 15, 2008 – Citigroup announced it would raise $12.5 billion in new capital to shore up its balance sheet through the sale of convertible preferred securities and would cut its quarterly dividend by 40%. The Government of Singapore Investment Corporation invested $6.88 billion in the financing, for a 4% stake in the company. Other investors included the Kuwaiti Investment Authority, Prince Alwaleed bin Talal, one of Citigroup's largest shareholders, and Sandy Weill, former chief executive officer. The private placement announcement followed a fourth quarter loss of $9.83 billion following a writedown of $18.1 billion on its subprime mortgage-related exposure and increased losses on consumer loans. *Source: Citigroup Press Release, Financial Times.*

H.) February 17, 2008 - Alistair Darling, Britain's Chancellor of the Exchequer, announced the nationalization of Northern Rock, the first nationalization of a sizeable British bank in a quarter of a century. Northern Rock had received two private offers; however, Alistair Darling said the offers were not sufficient to ensure that the £25 billion in loans from the Bank of England would be repaid. *Source: Financial Times.*

I.) March 11, 2008 – In its biggest intervention yet, the Federal Reserve announced it would lend primary dealers up to $200 billion in Treasury securities for 28 days at a time and accept AAA-rated private label MBS as collateral in return.

The loans were implemented by a new Term Securities Lending Facility made available to investment banks and other securities houses unable to access the TAF cash loans announced in December 2007. The Federal Reserve, the European Central Bank and the Swiss National Bank simultaneously announced a $12 billion increase to the $24 billion of currency swaps put in place in December 2007. *Source: Federal Reserve.*

J.) March 16, 2008 - The Federal Reserve established the PDCF, extending credit to primary dealers at the primary credit rate against a broad range of investment grade securities. The initiative was designed to bolster market liquidity and promote orderly market functioning. *Source: Federal Reserve.*

K.) March 24, 2008 – JPMorgan announced the acquisition of Bear Stearns for $10 per share after the original offer of $2 per share was rebuffed by shareholders. In addition, JPMorgan and Bear Stearns entered into a share purchase agreement under which JPMorgan would purchase 95 million newly-issued shares of Bear Stearns common stock, or 39.5% of the outstanding Bear Stearns common stock after giving effect to the issuance, at the same price as provided in the amended merger agreement. JPMorgan also agreed to guarantee Bear Stearns' borrowings from the FRBNY. The FRBNY's $30 billion special financing associated with the transaction was also amended so that JPMorgan would bear the first $1 billion of any losses associated with the Bear Stearns assets being financed and the Federal Reserve would fund the remaining $29 billion on a non-recourse basis to JPMorgan. The deal closed on May 29, 2008. *Source: JPMorgan Press Release, Federal Reserve.*

L.) April 8, 2008 – Washington Mutual, the largest savings and loans bank in the United States at the time, announced a $7 billion cash infusion from investors to boost its capital and cover losses arising from its subprime mortgages. The investors were led by private equity group, TPG Capital, which provided $2 billion. The investment was in the form of an issuance of 176 million shares of common stock. *Source: Washington Mutual Press Release, Financial Times.*

M.) April 22, 2008 – The Royal Bank of Scotland announced a deeply discounted £12 billion rights issue in an attempt to cover £5.9 billion in writedowns on risky mortgage assets. The rights issue was the largest in U.K. history and the writedowns were the largest yet for a British bank. *Source: International Herald Tribune.*

N.) May 6, 2008 – BlackRock agreed to pay UBS $15 billion for a portfolio of subprime mortgage debt. The UBS debt, which was bought at a 25% discount to its face value of $20 billion, was placed in a new BlackRock fund and marketed to investors. BlackRock agreed in March 2008 to manage $29 billion in mostly mortgage-related securities that were held on Bear Stearns' balance sheet as part of JPMorgan's emergency purchase of Bear Stearns. As described previously, the Federal Reserve lent $29 billion to Bear Stearns in return for the securities and hired BlackRock to manage the portfolio. *Source: Financial Times.*

O.) May 22, 2008 – UBS announced a deeply discounted rights issue to stockholders to raise $15.5 billion to boost capital ratios. The capital was needed to cover

the $19 billion in writedowns incurred in the first quarter of 2008, mostly for mortgage assets. *Source: Financial Times.*

P.) June 25, 2008 – Barclays announced a £4.5 billion share issuance to boost its capital ratios, which were among the lowest in the European banking sector. The Qatar Investment Authority, a sovereign wealth fund, and Hamad bin Jassim Bin Jaber Al Thani, the chairman of Qatar Holding, financed half of the offering. *Source: Barclays Press Release.*

Q.) July 11, 2008 – IndyMac was closed by regulators after it was no longer able to meet continued demands by customers for their deposits. In the 11 days after New York Senator Charles Schumer released a letter expressing concerns about IndyMac's viability, depositors withdrew more than $1.3 billion from their accounts. The OTS, the bank's main regulator, attributed IndyMac's closing to this run on deposits. IndyMac, with $32 billion in assets, became the second largest U.S. financial institution to be closed down, ranking only behind the Continental Illinois National Bank & Trust Company, which closed in 1984 with $40 billion in assets. IndyMac's operations were transferred to the FDIC, which was named conservator. On August 1, 2008, IndyMac filed for Chapter 7 bankruptcy protection. *Source: Federal Deposit Insurance Corporation, CNNMoney.*

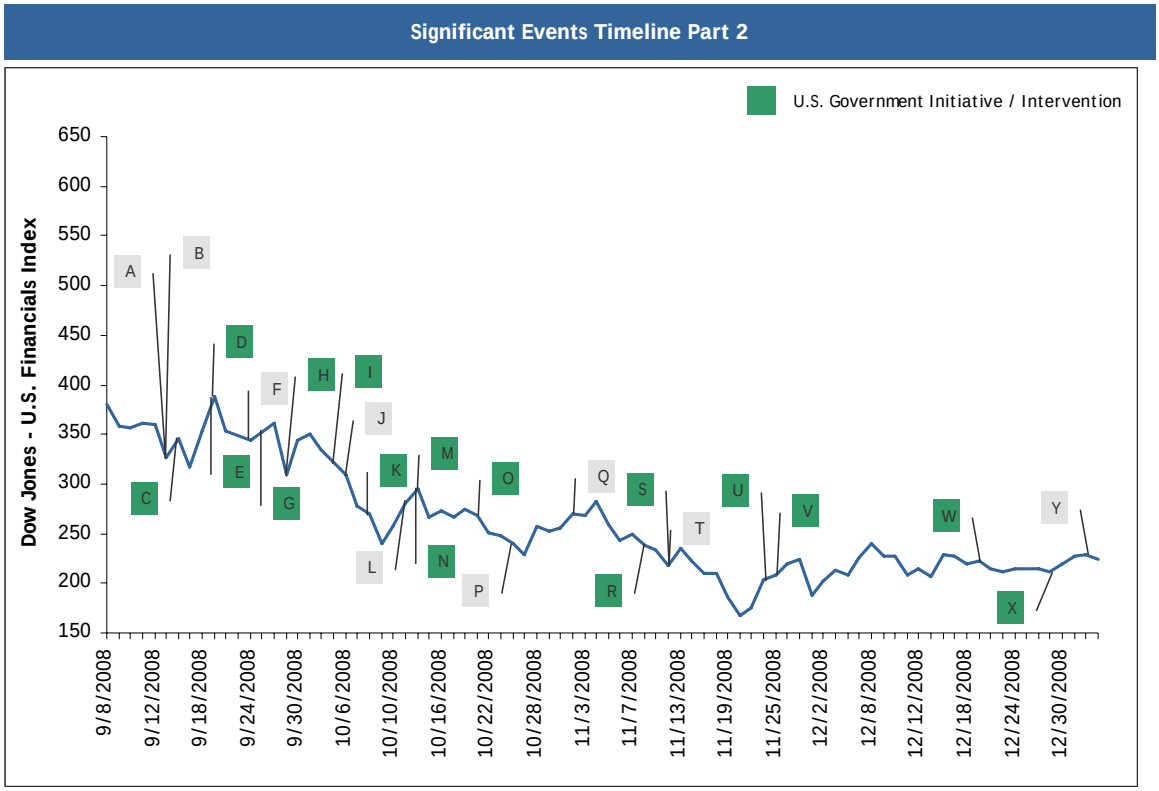
R.) July 13, 2008 – In an effort to alleviate the crisis surrounding Fannie Mae and Freddie Mac, Treasury Secretary Henry Paulson announced the U.S. government's intention to seek unlimited authority from Congress to lend money to the troubled mortgage groups and invest in their equity. Meanwhile, the Federal Reserve announced it would provide Fannie Mae and Freddie Mac emergency funds on the same terms as banks, should it become necessary. Secretary Paulson outlined a three-pronged strategy to resolve the crisis at Fannie Mae and Freddie Mac, whose shares collapsed over concerns about their potential losses on mortgage holdings. Under the plan, the Treasury would be authorized to increase its existing $2.25 billion lines of credit to Fannie Mae and Freddie Mac. In addition, the Treasury would have temporary authority to purchase equity in either of the two GSEs if needed. Use of either the line of credit or the equity investment would be at the discretion of the Treasury Secretary. The third part of the plan allowed Fannie Mae and Freddie Mac to borrow from the Federal Reserve's discount window through which it extends emergency finance in return for collateral. The Federal Reserve would also be granted a consultative role in shaping the future regulatory framework for Fannie Mae and Freddie Mac. *Source: U.S. Department of the Treasury, Federal Reserve.*

S.) July 30, 2008 – President Bush signed into law the Housing and Economic Recovery Act of 2008, which, among other provisions, authorized the Treasury to purchase GSE obligations and reformed the regulatory supervision of the GSEs under a new Federal Housing Finance Agency. *Source: The White House.*

T.) September 7, 2008 – The U.S. government seized control of Fannie Mae and Freddie Mac in the world's biggest financial bail-out. The government agreed to inject $100 billion into each mortgage group to ensure the troubled mortgage lenders would be able to meet their debts. In addition, the government agreed

to buy mortgage bonds backed by Fannie Mae and Freddie Mac starting with an initial $5 billion purchase, and provide an unlimited liquidity facility to them until the end of 2009. To lower future risk to tax payers, the government would allow Fannie Mae and Freddie Mac to grow in the short term to $850 billion each, but starting in 2010 they will be required to shrink their portfolios by 10% a year until they reach $250 billion each. At the time of the rescue, Fannie Mae and Freddie Mac guaranteed three-quarters of all new U.S. mortgages. *Source: U.S. Department of the Treasury, Financial Times.*

Dow Jones U.S. Financials Index
September 8, 2008 through January 5, 2009



Source: Dow Jones U.S. Financials Index pricing data provided by Capital IQ.

A.) September 15, 2008 – Lehman announced it would file for Chapter 11 bankruptcy after the Federal Reserve declined to provide financial support to Lehman. The bankruptcy case would not include Lehman's broker-dealer operations or its investment management division. Lehman announced it was exploring a sale of both divisions. *Source: Lehman Brothers Press Release.*

B.) September 15, 2008 – BofA announced the acquisition of Merrill Lynch in a $50 billion all-stock transaction. Having completed the acquisition of Countrywide on July 1, 2008, Merrill Lynch was BofA's second significant acquisition in 2008, both of which were stricken with bad mortgage assets. *Source: Bank of America Press Release, Financial Times.*

C.) September 16, 2008 – The Federal Reserve announced that it would lend AIG up to $85 billion in emergency funds in return for an ownership stake of 79.9% and effective control of the company. The Federal Reserve determined that, in current circumstances, a disorderly failure of AIG could add to already significant levels of financial market fragility and lead to substantially higher borrowing costs, reduced household wealth, and materially weaker economic performance. *Source: Federal Reserve, AIG Press Release.*

D.) September 19, 2008 – The SEC, acting in concert with the U.K. Financial Services Authority, issued a temporary ban on the short selling of financial stocks in an attempt to mitigate some of the worst stock market slides in years. The SEC also announced other temporary measures, including a requirement for large institutional money managers to report short positions in certain stocks and an easing of restrictions on corporate stock buybacks. The temporary measures were in effect until October 17, 2008. *Source: Securities and Exchange Commission, Wall Street Journal.*

E.) September 19, 2008 – The Federal Reserve Board announced the creation of the AMLF to extend non-recourse loans at the primary credit rate to U.S. depository institutions and bank holding companies to finance their purchase of high quality asset backed commercial paper from money market mutual funds. The Federal Reserve also unveiled its plan to purchase federal agency discount notes (short-term debt obligations issued by Fannie Mae, Freddie Mac, and Federal Home Loan Banks) from primary dealers. Both initiatives were designed to provide liquidity to the markets. *Source: Federal Reserve.*

F.) September 24, 2008 – Goldman announced an agreement to sell $5 billion of perpetual preferred stock to Berkshire Hathaway in a private offering. The preferred stock would pay a 10% dividend and would be callable at any time at a 10% premium. In conjunction with this offering, Berkshire Hathaway would also receive warrants to purchase $5 billion of common stock with a strike price of $115 per share, which would be exercisable at any time for a five year term. Goldman also announced its intention to raise at least $2.5 billion in common equity in a public offering. *Source: Goldman Sachs Press Release.*

G.) September 25, 2008 – The OTS seized the assets of Washington Mutual, the sixth largest U.S. bank at the time, and placed it into the receivership of the FDIC. Washington Mutual had attempted to auction itself to potential buyers; however, the bank received little interest as a result of its large mortgage market exposure and likelihood of further writedowns. The failure of Washington Mutual marked the biggest bank failure in U.S. history. After regulators seized Washington Mutual's operations, JPMorgan agreed to pay the FDIC $1.9 billion for Washington Mutual's deposits and retail branches, making JPMorgan the largest U.S. depository institution. In addition, JPMorgan agreed to take on Washington Mutual's troubled mortgage portfolio but did not assume any of Washington Mutual's $22.6 billion in unsecured debt or any of the assets or liabilities of the holding company. Washington Mutual, the holding company leftover, ultimately filed for Chapter 11 bankruptcy on September 28, 2008. *Source: United States Office of Thrift Supervision, Federal Deposit Insurance Corporation, JPMorgan Press Release.*

H.) September 29, 2008 – Citigroup agreed to acquire the banking operations of Wachovia, the sixth largest U.S. lender, for $2.2 billion. The takeover was engineered by the FDIC who agreed to provide a cap on losses of Wachovia's $312 billion mortgage portfolio. In return for that cap on losses, Citigroup agreed to give the FDIC a $12 billion stake in the form of preferred shares and warrants. Although the FDIC would not hold any voting rights, the arrangement could turn the government entity into one of Citigroup's largest shareholders. As further described below, the Citigroup-Wachovia transaction was not

consummated as Wells Fargo ultimately agreed to acquire Wachovia at a more attractive price to Wachovia shareholders. *Source: Citigroup Press Release, Financial Times.*

I.) October 3, 2008 – Congress passed and President Bush signed the EESA, which established the OFS within the Treasury and authorized the TARP. The $700 billion rescue plan, among other things, authorizes the Treasury to purchase and insure certain types of troubled assets for the purposes of providing stability to and preventing disruption in the economy and financial system and protecting taxpayers. The enactment of the EESA marked one of the most far-reaching government interventions since the Great Depression. *Source: U.S. Department of the Treasury, CNNMoney.*

J.) October 4, 2008 – Wells Fargo announced it would pay $15.1 billion, approximately $7 per share, in an all-share deal to purchase Wachovia, trumping Citigroup's $2.2 billion government-aided offer announced on September 29, 2008. In contrast to Citigroup's offer, the Wells Fargo deal did not require government support and involved the acquisition of the entire bank, including its asset management and brokerage arms. Following a series of court hearings, Citigroup abandoned its attempt to purchase Wachovia, and on October 12, 2008, the Federal Reserve approved the transaction between Wells Fargo and Wachovia. *Source: Wells Fargo Press Release, Financial Times.*

K.) October 7, 2008 – The Federal Reserve announced the creation of the CPFF, a complementary facility to the Federal Reserve's existing credit facilities to help provide liquidity to term funding markets. The CPFF was designed to provide a liquidity backstop to U.S. issuers of commercial paper through a special purpose vehicle that would purchase three-month unsecured and asset-backed commercial paper directly from eligible issuers. *Source: Federal Reserve.*

L.) October 13, 2008 – MUFG, Japan's largest financial group and the world's second largest bank holding company with $1.1 trillion in bank deposits, announced it had closed on a $9 billion equity investment in Morgan Stanley giving MUFG a 21% ownership interest in Morgan Stanley on a fully diluted basis. Under the revised terms of the transaction, which was initially announced on September 29, 2008, MUFG acquired $7.8 billion of perpetual non-cumulative convertible preferred stock with a 10% dividend and a conversion price of $25.25 per share, and $1.2 billion of perpetual non-cumulative non-convertible preferred stock with a 10% dividend. *Source: Morgan Stanley Press Release.*

M.) October 14, 2008 – The Treasury announced the TARP CPP, a voluntary program designed to encourage U.S. financial institutions to build capital, to increase the flow of financing to U.S. businesses and consumers, and to support the U.S. economy. Under the first tranche of TARP CPP funds, the Treasury will purchase up to $250 billion of senior preferred shares on standardized terms and conditions. The CPP is available to qualifying U.S. controlled banks, savings associations, and certain bank and savings and loan holding companies engaged only in financial activities. The Treasury will determine eligibility and allocations for interested parties after consultation with the appropriate federal banking agency. The CPP marked a change in emphasis in its rescue

efforts from buying illiquid assets to recapitalizing banks in exchange for preferred equity and warrants. *Source: U.S. Department of the Treasury.*

N.) October 14, 2008 – The FDIC announced the TLGP, under which it would temporarily guarantee all newly issued senior unsecured debt of participating organizations for up to three years. In addition, the FDIC provided an unlimited guarantee on non-interest bearing transaction accounts that expires at the end of 2009. The program was designed to strengthen confidence and encourage liquidity in the banking system. *Source: Federal Deposit Insurance Corporation.*

O.) October 21, 2008 – The Federal Reserve announced its plan to spend $540 billion to purchase short-term debt from money market mutual funds. The large amount of redemption requests during the credit crisis had caused money market funds to scale back lending to banks contributing to the credit freeze on interbank lending markets. The purpose of the injection was to help unfreeze the credit markets making it easier for businesses and banks to obtain loans. *Source: Federal Reserve.*

P.) October 24, 2008 – PNC announced an agreement to acquire NCC for approximately $5.2 billion in PNC stock. The acquisition of NCC closed on December 31, 2008 and makes PNC the fifth largest U.S. bank by deposits. *Source: PNC Press Release.*

Q.) October 31, 2008 – Barclays announced a proposal to raise up to £7.3 billion of additional capital from existing and new strategic and institutional investors. The capital raising would be effected through an issue of £3 billion of reserve capital instruments, with an associated issue of warrants, and an issue of up to £4.3 billion of mandatorily convertible notes. Qatar Holding and entities representing the beneficial interests of HH Sheikh Mansour Bin Zayed Al Nahyan, a member of the Royal Family of Abu Dhabi, agreed to invest in the transaction. Barclays ultimately raised a total of £7.05 billion, £4.05 billion through the issue of convertible notes and £3 billion through the issue of reserve capital instruments. *Source: Barclays Press Release.*

R.) November 10, 2008 – AIG announced agreements with the Treasury and the Federal Reserve to establish a durable capital structure for AIG, and facilities designed to resolve the liquidity issues AIG has experienced in its credit default swap portfolio and its U.S. securities lending program. The Treasury agreed to purchase, under the terms of the SSFI program, $40 billion in senior preferred stock and warrants to purchase a number of shares of common stock of AIG equal to 2% of AIG's issued and outstanding shares as of the purchase date. All of the proceeds would be used to pay down a portion of the FRBNY credit facility. *Source: U.S. Department of the Treasury, Federal Reserve, AIG Press Release.*

S.) November 12, 2008 – Secretary Paulson announced that the Treasury had abandoned its plan to purchase illiquid mortgage-related assets with TARP funds. Paulson stated that the remaining TARP funds would instead be spent on an expanded program to recapitalize financial institutions; support markets for securities backed by consumer debts; and mitigate mortgage foreclosures. *Source: U.S. Department of the Treasury.*

T.) November 12, 2008 – The FDIC approved the application of GE Capital for designation as an eligible entity under the FDIC's TLGP. The FDIC agreed to guarantee GE Capital's senior unsecured debt, including commercial paper and term debt until June 30, 2009. *Source: General Electric Press Release.*

U.) November 23, 2008 – The U.S. government agreed to rescue Citigroup by helping to absorb potentially hundreds of billions of dollars in losses on toxic assets on Citigroup's balance sheet and injecting fresh capital into the troubled financial institution. Under the plan, Citigroup will absorb the first $29 billion in losses tied to a $306 billion portfolio of troubled assets. The Treasury, the Federal Reserve and the FDIC would take on any additional losses. In exchange for that protection, Citigroup agreed to give the government warrants to buy shares in the company. In addition, Citigroup agreed to issue an incremental $7 billion in preferred stock to the Treasury and the FDIC as payment for the government guarantee. The Treasury also agreed to invest $20 billion in Citigroup preferred stock using TARP funds. *Source: Wall Street Journal, Citigroup Press Release.*

V.) November 25, 2008 – The Federal Reserve announced an $800 billion program to bolster markets for loans to homebuyers, consumers, students and small businesses. The Federal Reserve stated that $600 billion would be used to purchase the direct obligations of housing-related GSEs (Fannie Mae, Freddie Mac, and the Federal Home Loan Banks) and MBS backed by Fannie Mae, Freddie Mac, and Ginnie Mae. This program was designed to reduce the cost and increase the availability of credit for the purchase of houses, in order to support housing markets and foster improved conditions in financial markets more generally. In addition, the Federal Reserve announced the creation of the TALF, a facility designed to help market participants meet the credit needs of households and small businesses by supporting the issuance of ABS collateralized by student loans, auto loans, credit card loans, and loans guaranteed by the Small Business Administration. Under the TALF, the FRBNY agreed to lend up to $200 billion on a non-recourse basis to holders of certain AAA-rated ABS backed by newly and recently originated consumer and small business loans. The Treasury, under TARP, announced it would provide $20 billion of credit protection to the FRBNY in connection with the TALF. *Source: Federal Reserve.*

W.) December 19, 2008 – The White House announced a $17.4 billion rescue package for GM and Chrysler, two of the troubled Detroit automakers. The deal would extend $13.4 billion in loans to GM and Chrysler in December 2008 and January 2009, with another $4 billion likely available in February 2009. It also would provide the government with non-voting warrants. *Source: U.S. Department of the Treasury, Wall Street Journal.*

X.) December 29, 2008 – The Treasury announced that it would purchase $5 billion in equity from GMAC LLC as part of its program to assist the domestic automotive industry. The Treasury also agreed to lend up to $1 billion to GM. This commitment was in addition to the support announced on December 19, 2008. *Source: U.S. Department of the Treasury.*

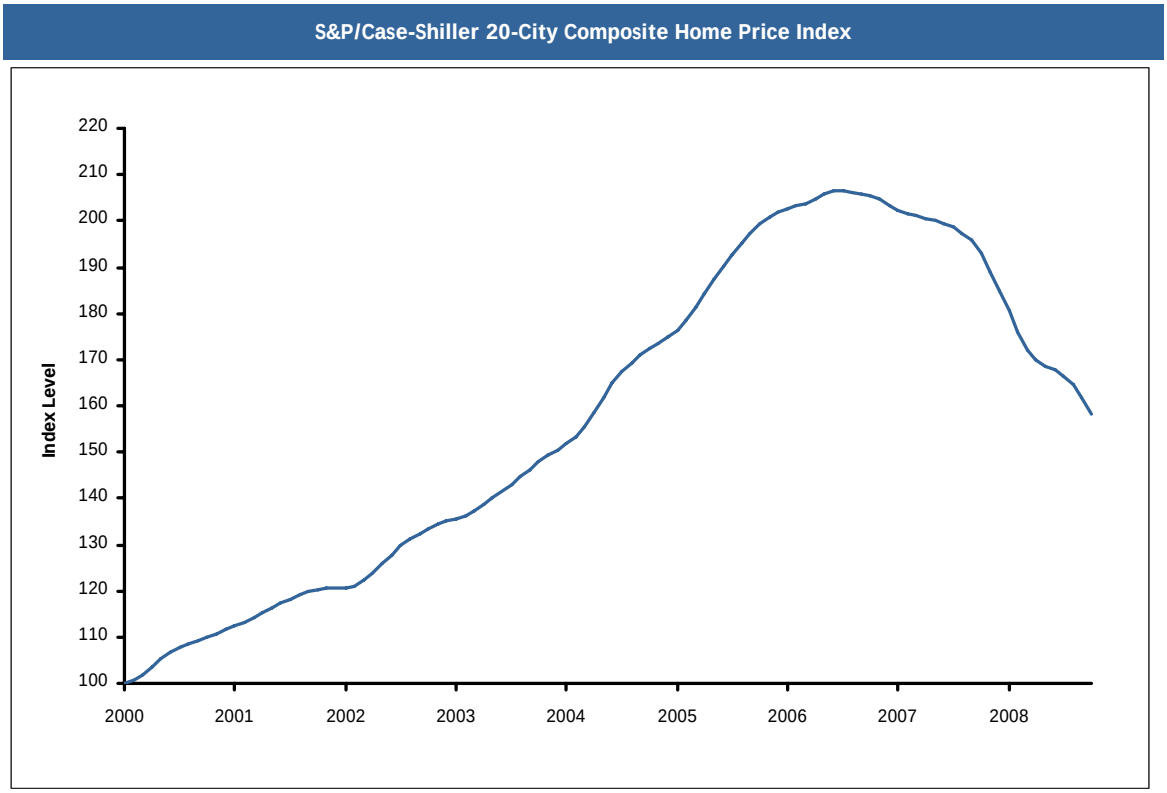
Y.) January 2, 2009 – A seven-member group of investors, led by Dune Capital Management LP, agreed to purchase IndyMac from the FDIC for $13.9 billion. The investment group would contribute $1.3 billion in new capital when the transaction is closed. The investor group and the FDIC also agreed to share losses on IndyMac's portfolio of troubled mortgages. The FDIC stated it expects to lose up to $9.4 billion from the IndyMac failure. *Source: Federal Deposit Insurance Corporation, Wall Street Journal.*

B. Key Economic Indicators

The U.S. government provides ongoing data for more than sixty relevant measures of economic health.[1] In this section we examine several key economic indicators related to the recent decline in the U.S. economy.

[1] Federal Statistics Briefing Room, available from http://www.whitehouse.gov/fsbr/esbr.html.

S&P/Case Shiller 20-City Composite Home Price Index
January 2000 through October 2008

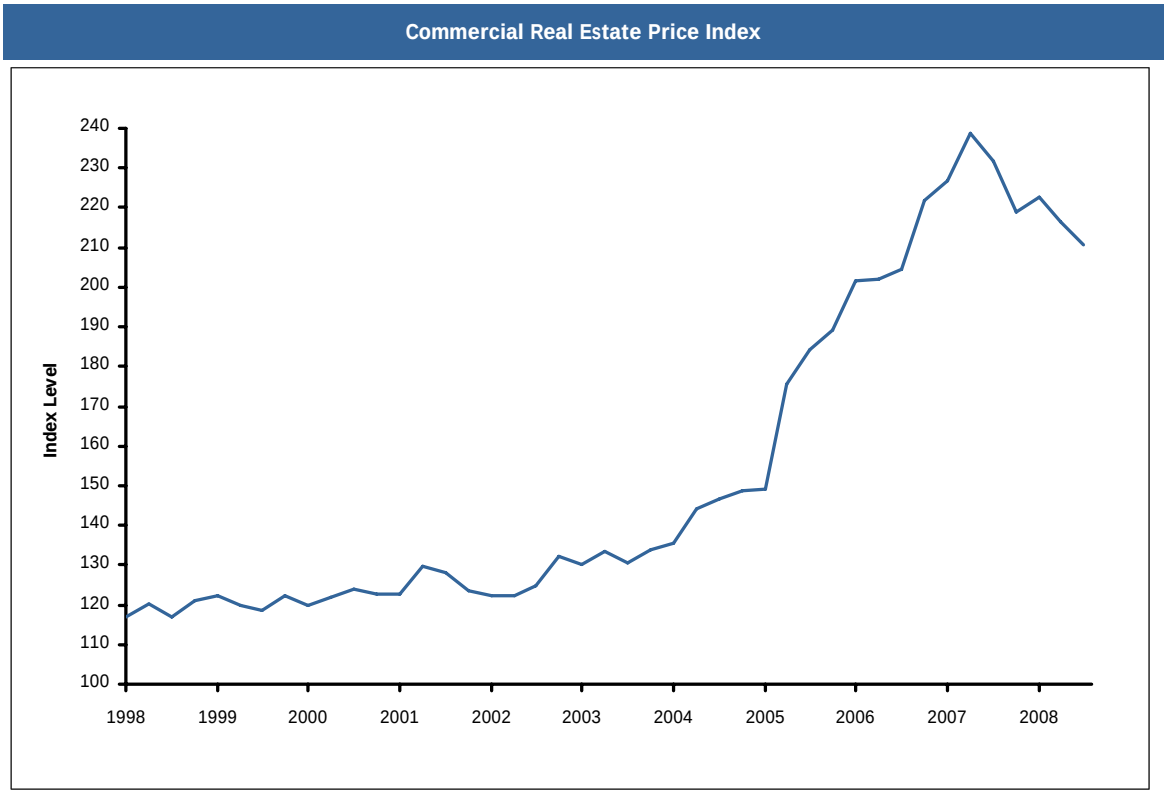


Source: Standard & Poor's.

The S&P/Case-Shiller Home Price Index measures the residential housing market, tracking changes in the value of the residential real estate market in 20 metropolitan regions across the U.S. Data through October 2008 shows continued broad based declines in the prices of existing single family homes across the U.S., with 14 of the 20 metropolitan areas showing record rates of annual decline and 14 metropolitan areas reporting declines in excess of 10% versus October 2007.[2]

[2] Standard & Poor's, available from http://www.standardandpoors.com.

MIT Center for Real Estate Transactions Based-Index
Q1 1998 through Q3 2008

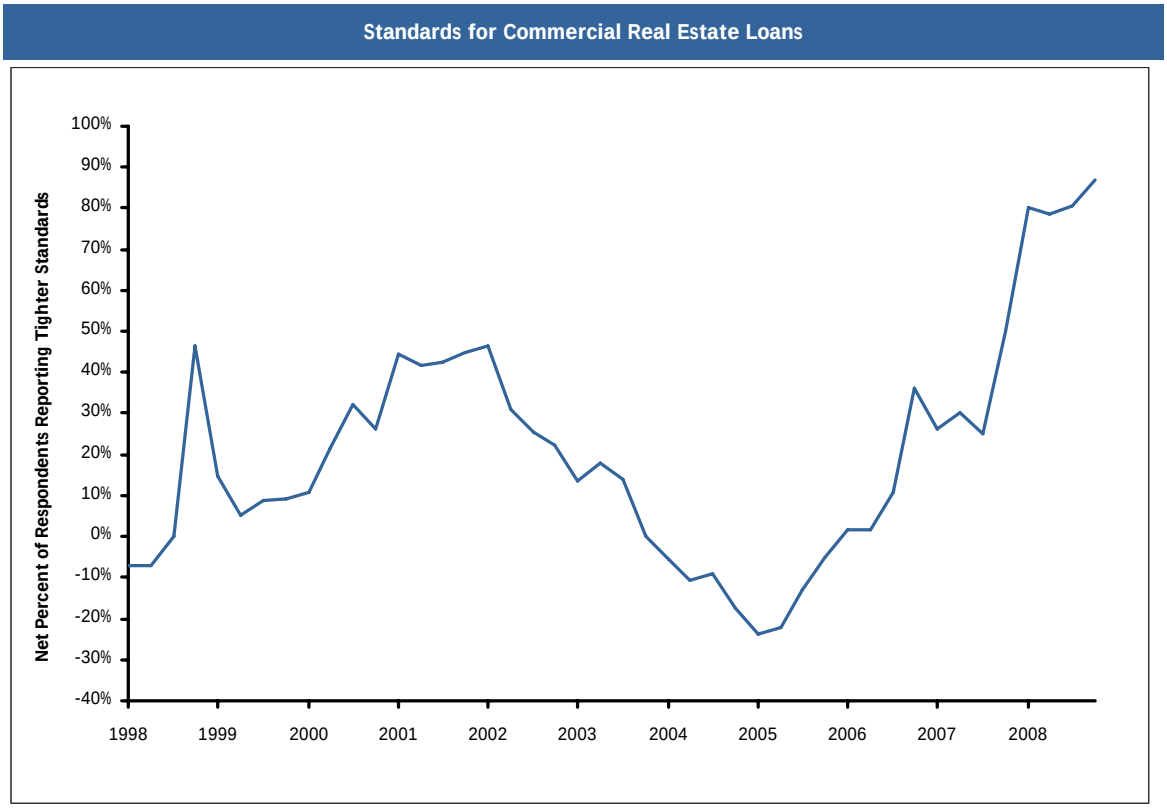


Source: MIT Center for Real Estate.

The MIT Center for Real Estate Transactions-Based Index measures commercial real estate market movements and returns on investment based on transaction prices of properties sold from the NCREIF Index database. Results for the third quarter of 2008 show a 2.5% decline in prices compared to the previous quarter for properties sold from the NCREIF database, placing the index 11.7% below its peak in the second quarter of 2007.[3]

[3] MIT Center for Real Estate, available from http://web.mit.edu/cre/research/credl/tbi.html.

Banks Reporting Tightening Standards for Commercial Real Estate Loans
Q1 1998 through Q3 2008

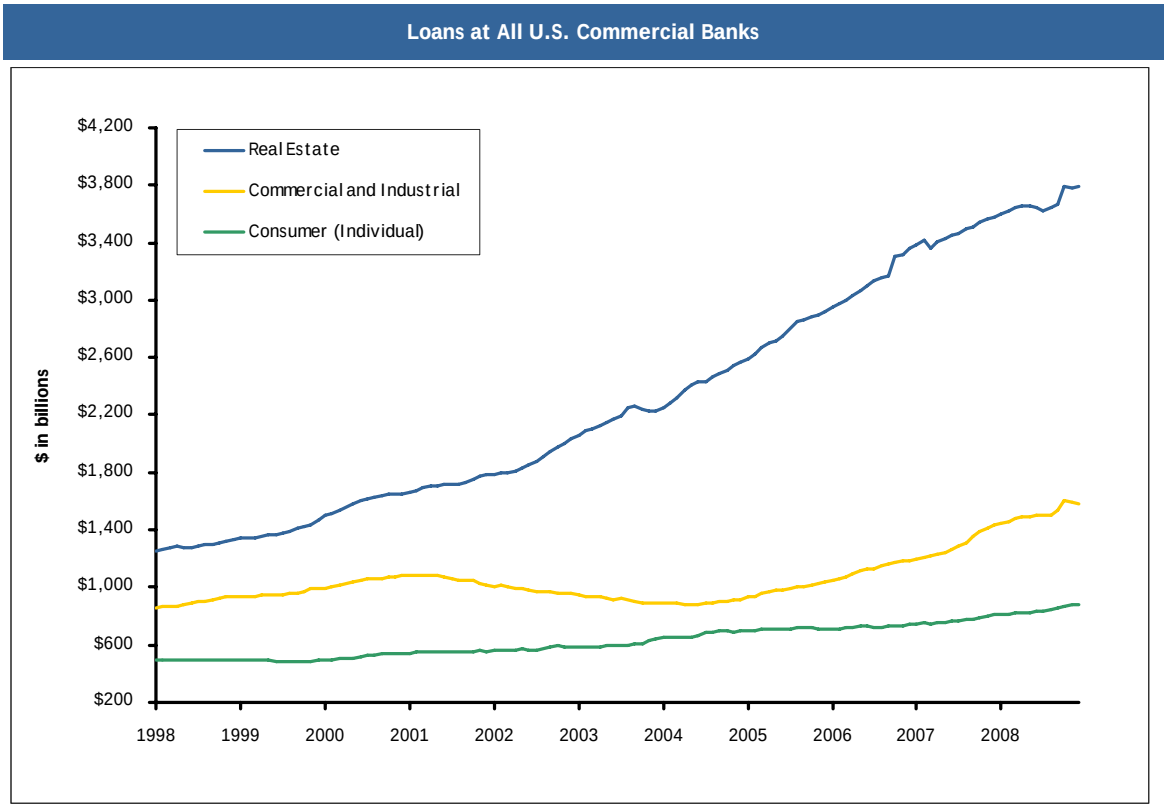


Source: The Federal Reserve Board.

The Senior Loan Officer Opinion Survey on Bank Lending Practices addresses changes in the supply of, and demand for, bank loans to businesses and households. In the October 2008 survey, 87.0% of domestic banks reported that they had tightened their lending standards on commercial real estate loans over the prior three months.[4]

[4] The Federal Reserve Board, available from http://www.federalreserve.gov/boarddocs/SnloanSurvey/200811/

Loans at All U.S. Commercial Banks
January 1998 through December 2008

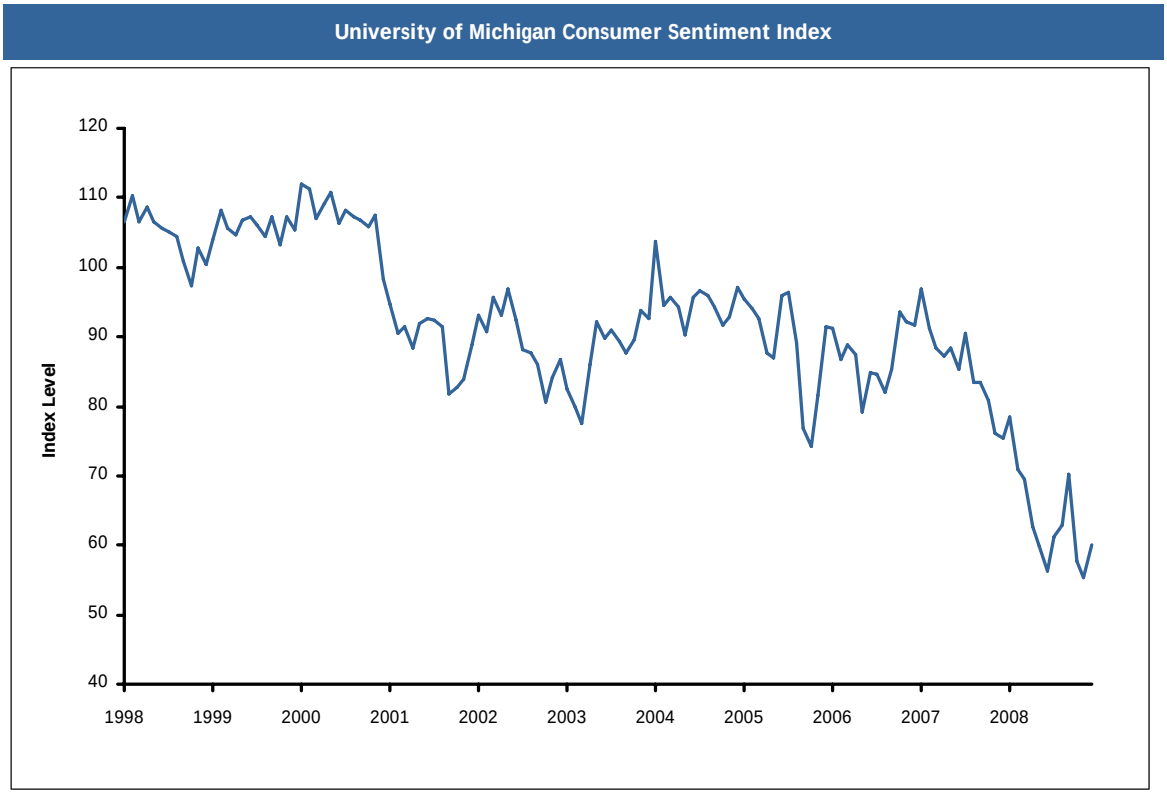


Source: Federal Reserve Bank of St. Louis.

During the past ten years, aggregate data on commercial bank lending show a significant increase in the dollar amount of loans for real estate, which represent a greater proportion of total loans today versus 1998.[5]

[5] Federal Reserve Bank of St. Louis, available from http://research.stlouisfed.org/fred2/categories/100.

The University of Michigan Consumer Sentiment Index
January 1998 through December 2008

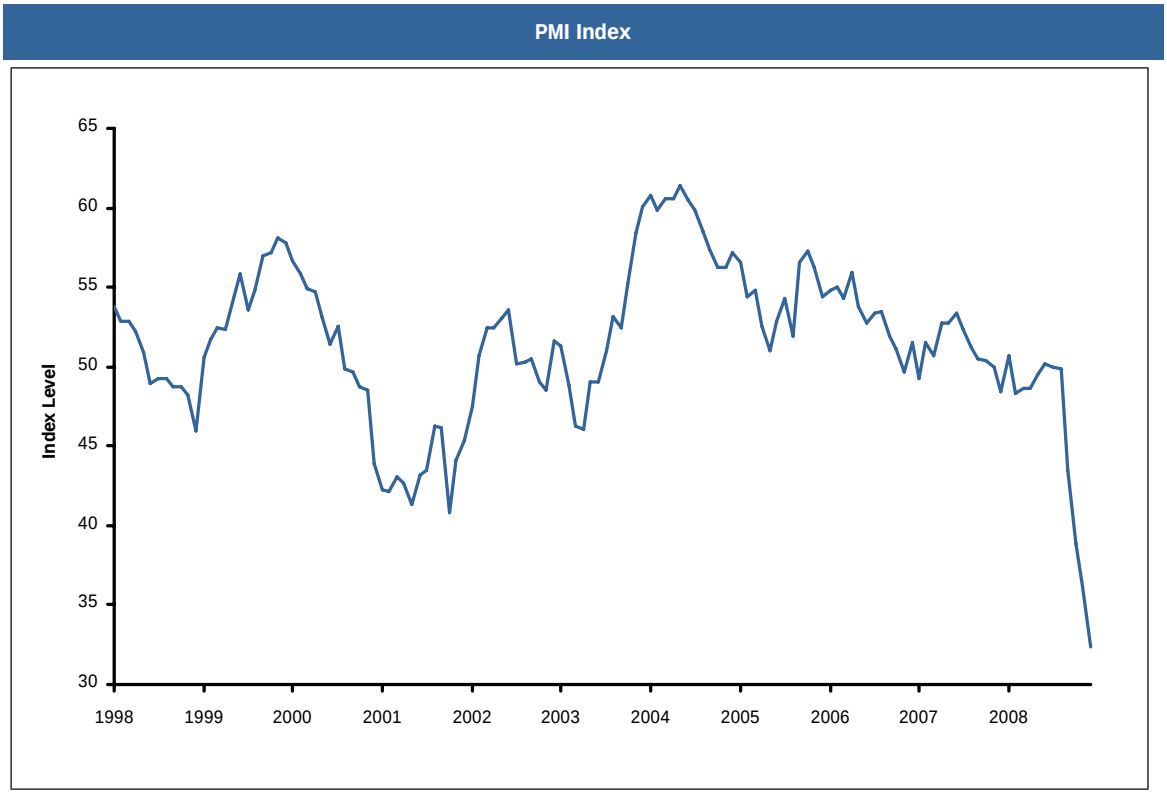


Source: Federal Reserve Bank of St. Louis.

The University of Michigan Consumer Sentiment Index is a consumer confidence index published monthly by the University of Michigan. In the November 2008 survey, the index hit 55.3, the lowest reading of the index in over 18 years.[6]

[6] Federal Reserve Bank of St. Louis, available from http://research.stlouisfed.org/fred2/series/UMCSENT/

Institute for Supply Management Manufacturing Index
January 1998 through December 2008

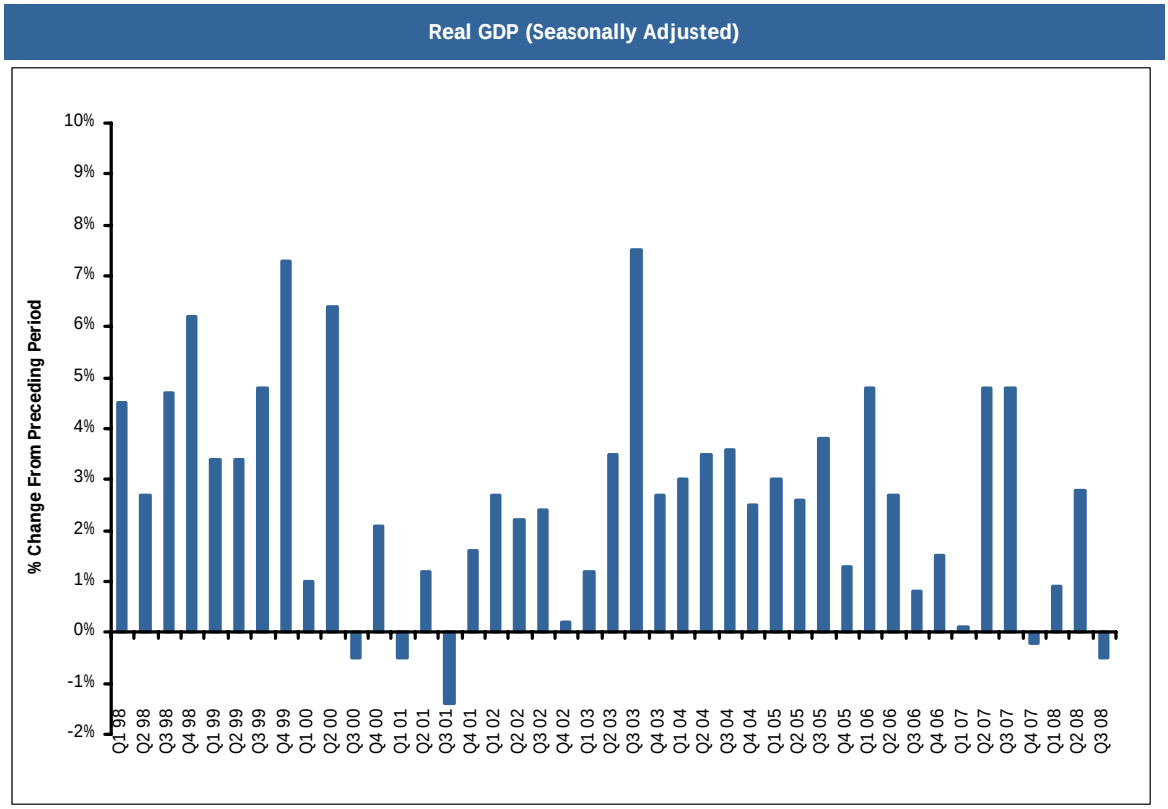


Source: Institute for Supply Management.

According to the December 2008 ISM Manufacturing *Report On Business*, manufacturing contracted in December 2008 as the PMI registered 32.4%, 3.8% lower than the 36.2% reported in November. This is the lowest reading since June 1980 when the PMI registered 30.3%. A PMI reading above 50% indicates that the manufacturing economy is generally expanding; below 50% indicates that it is generally contracting.[7]

[7] Institute for Supply Management, available from http://www.ism.ws/ISMReport/MfgROB.cfm?navItemNumber=12942

Real Gross Domestic Product
Q1 1998 through Q3 2008

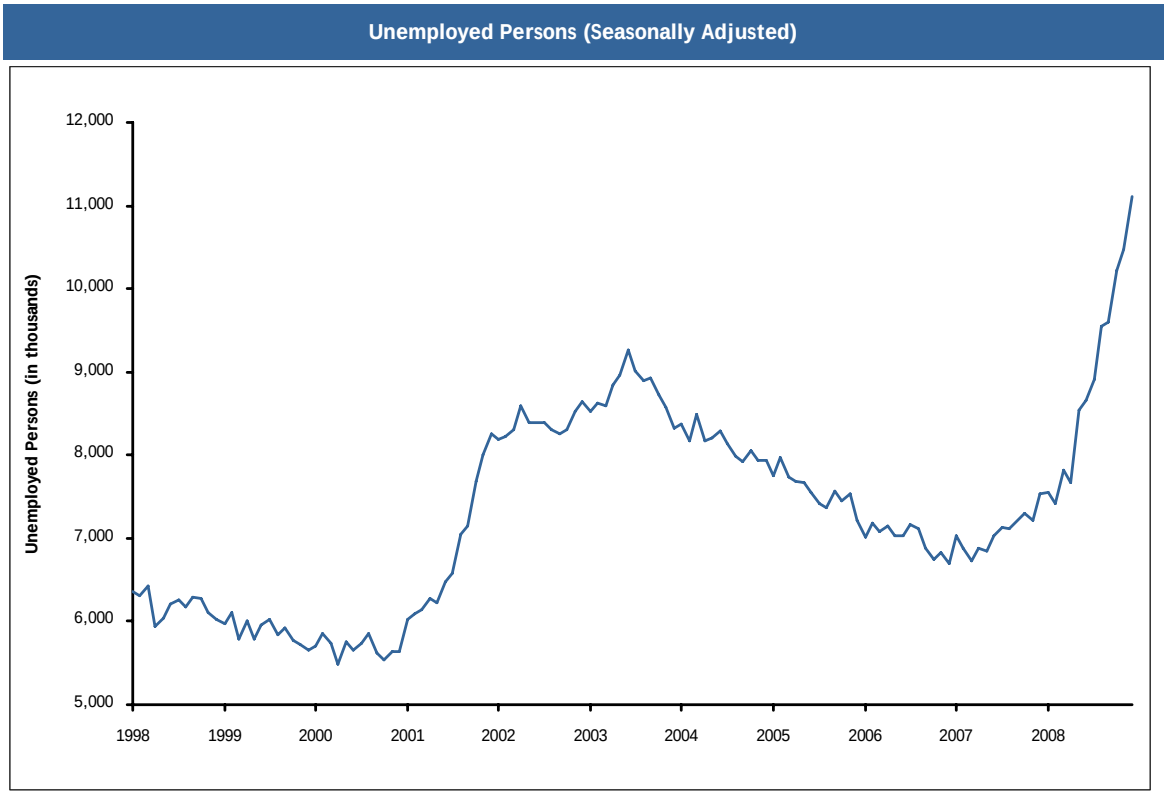


Source: U.S. Bureau of Economic Analysis.

It is likely that Q4 2008 GDP will be negative thereby signaling two consecutive quarters of negative growth (an old definition of "recession").[8]

[8] Bureau of Economic Analysis (U.S. Department of Commerce), available from http://www.bea.gov/briefrm/gdp.htm.

Unemployment
January 1998 through December 2008

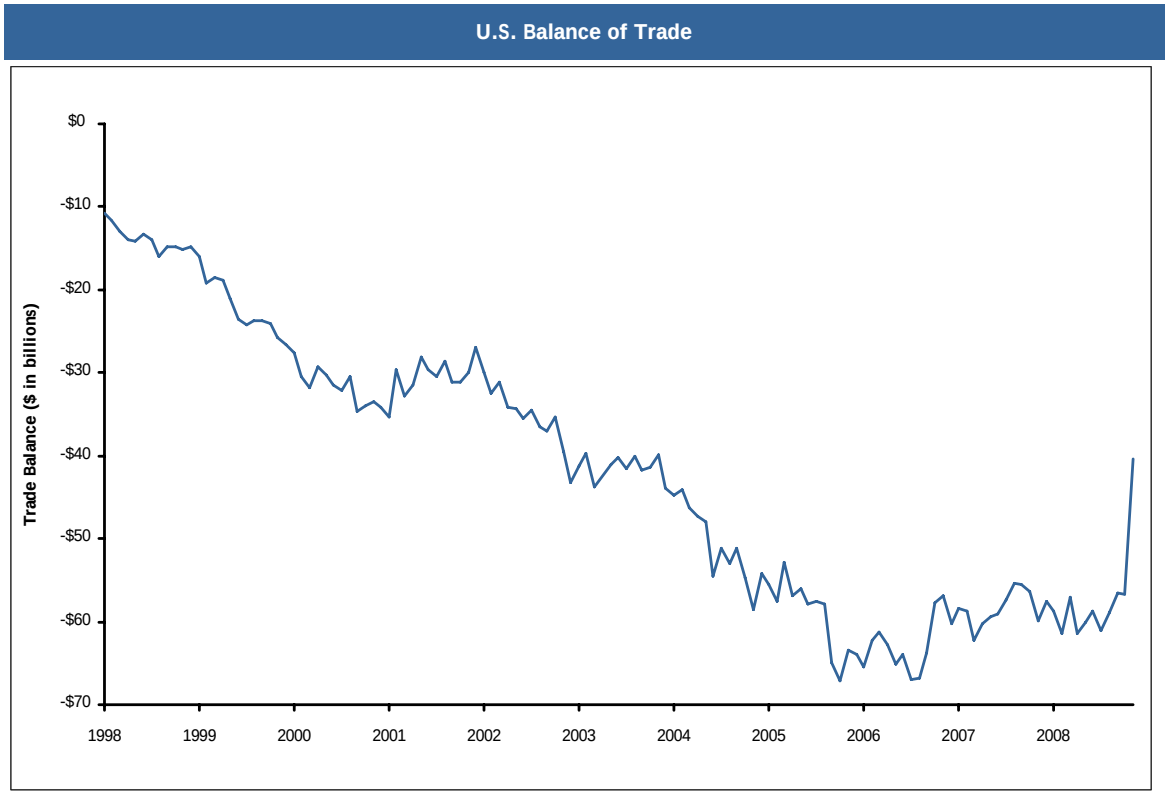


Source: Bureau of Labor Statistics.

There was a sharp rise in unemployment in 2008. Based largely on this data, the National Bureau of Economic Research declared that a recession had begun in December 2007.[9]

[9] Bureau of Labor Statistics (U.S. Department of Labor), available from http://data.bls.gov/PDQ/servlet/SurveyOutputServlet?request_action=wh&graph_name=LN_cpsbref2; Internet; and the National Bureau of Economic Research; available from http://www.nber.org/cycles/dec2008.html.

United States Balance of Trade
January 1998 through October 2008



Source: U.S. Census Bureau.

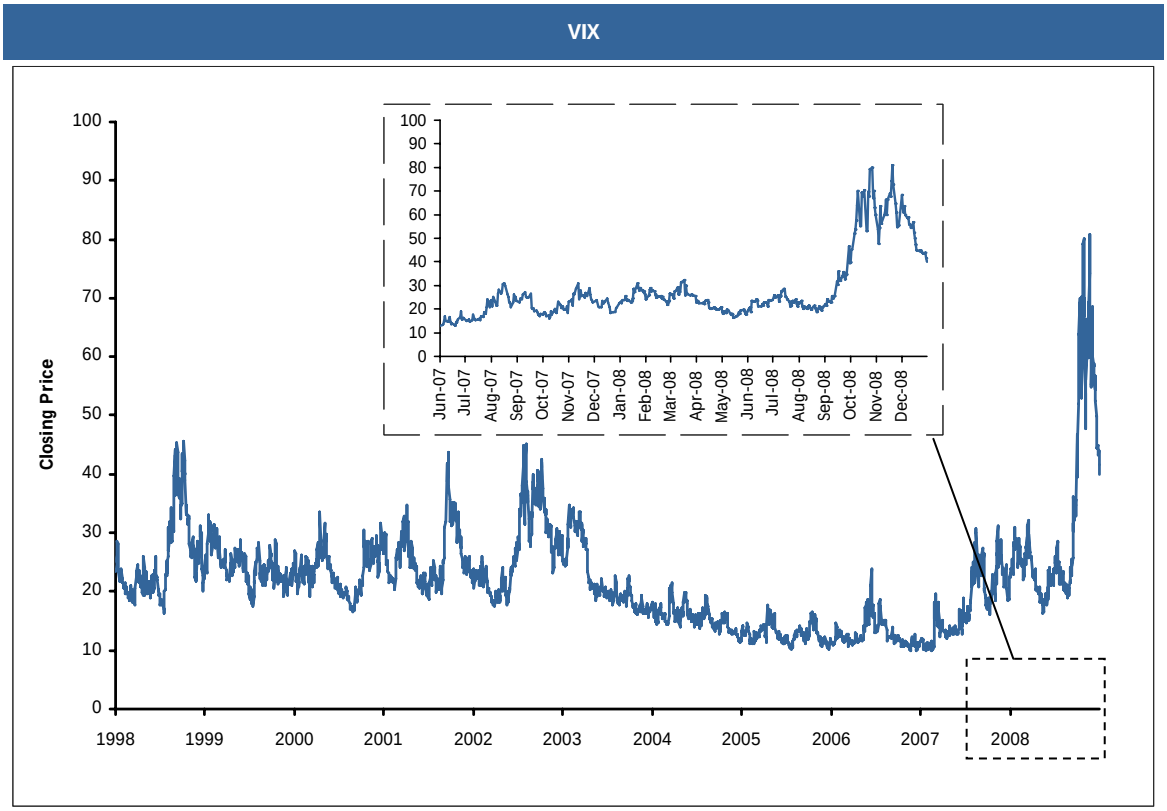
The U.S. deficit in international trade of goods and services contracted by 28.7% to $40.4 billion in November 2008, reflecting a drop in oil prices and a decrease in consumer demand for foreign goods.[10]

[10] Bater, J. (2009, Jan. 13). Trade Deficit Narrows Amid Restrained Demand. *Wall Street Journal.*

C. Key Market Indicators

The indicators described on the following pages have all experienced dramatic shifts during the current financial crisis. While imperfect measures, recovery of the selected market indicators below would indicate improving conditions in credit markets.

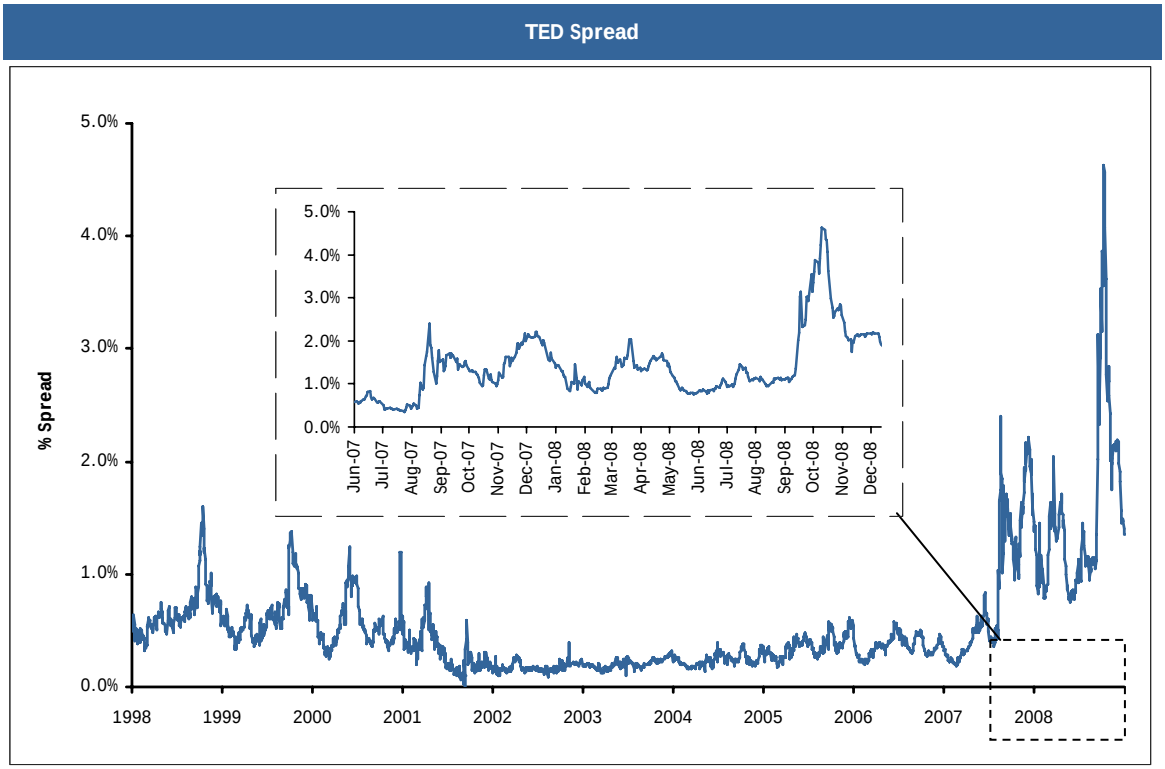
Chicago Board Options Exchange Volatility Index (VIX)
January 2, 1998 through December 31, 2008



Source: Capital IQ.

The VIX is a measure of expected stock market volatility over the next 30 days, calculated as an index of the prices of options on the S&P 500 Index. It is an indicator of uncertainty about the future price of stocks and general uncertainty about the economy. The figure above illustrates the historical VIX levels. The VIX reached an all-time high of 80.86 on November 20, 2008, far exceeding the historical average.

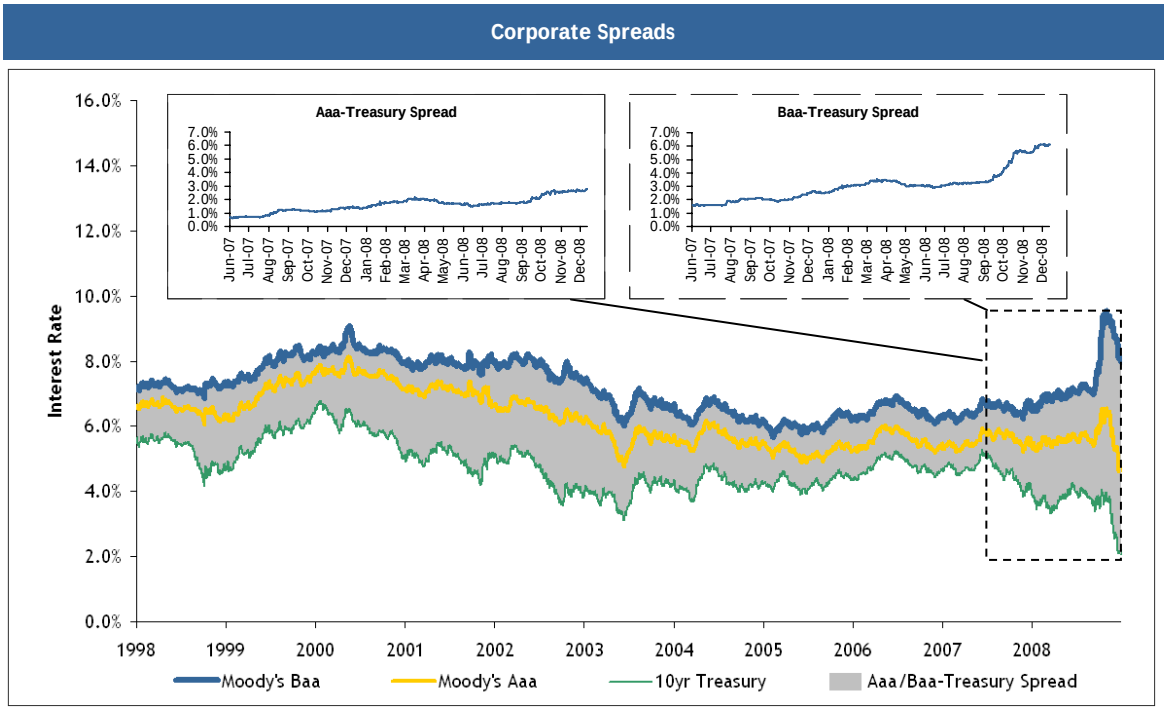
Treasury-Eurodollar ("TED") Spread
January 2, 1998 through December 31, 2008



Source: Bloomberg.

The TED Spread is the difference between the three-month Eurodollars contract as represented by LIBOR and the interest rate on T-bills with the same maturity. The TED Spread is an indicator of perceived credit risk that gauges willingness of banks to lend to other banks. Increases in the TED Spread imply an increased level of risk aversion in the market, as investors prefer short term T-bills, which due to their credit quality and short time horizon are considered risk free, and require a higher premium for loans to other institutions. The figure above illustrates the historical TED spread since 1998. The TED Spread peaked in October 2008 at over 4.5%, far exceeding the previous peak after the stock market crash in 1987.

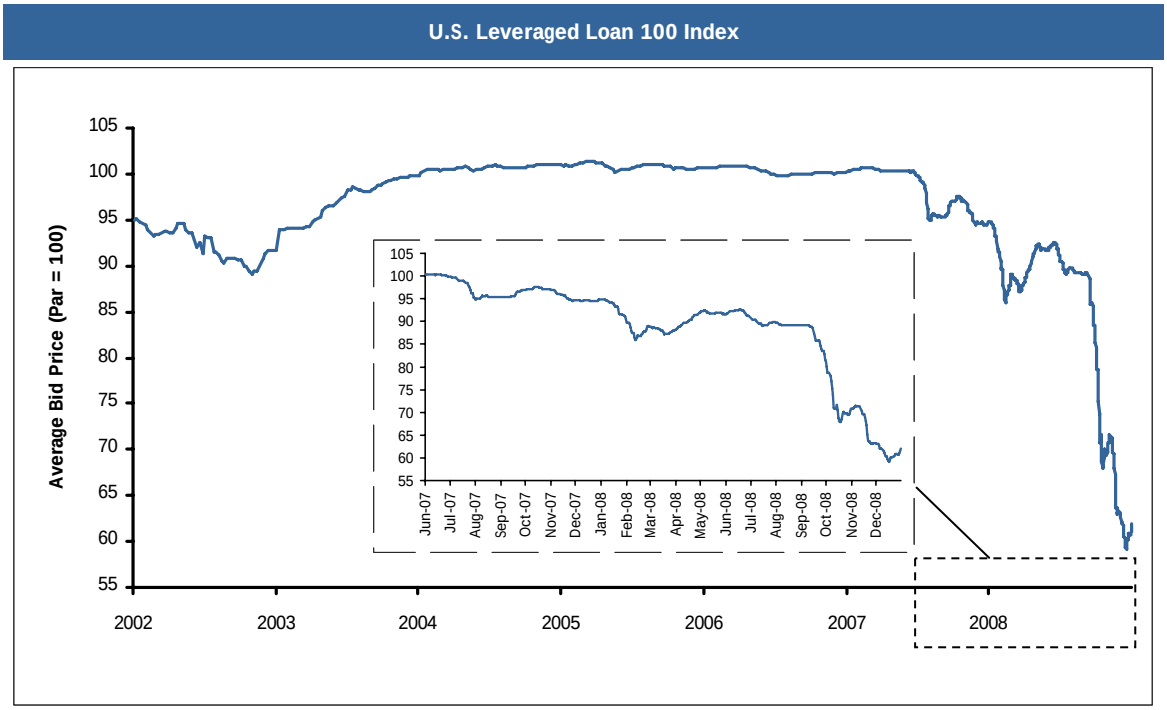
Corporate Spreads
January 2, 1998 through December 31, 2008



Source: Bloomberg.

The spread between Moody's Baa bond rate and Moody's Aaa bond rate or between these rates and the relevant government bond yield are indicators of perceived market risk. Higher spreads between the bonds indicate an elevated perception of risk with investors requiring a higher rate of return on corporate issuances. As shown in the figure above, corporate spreads have reached historically high levels amidst the credit crisis.

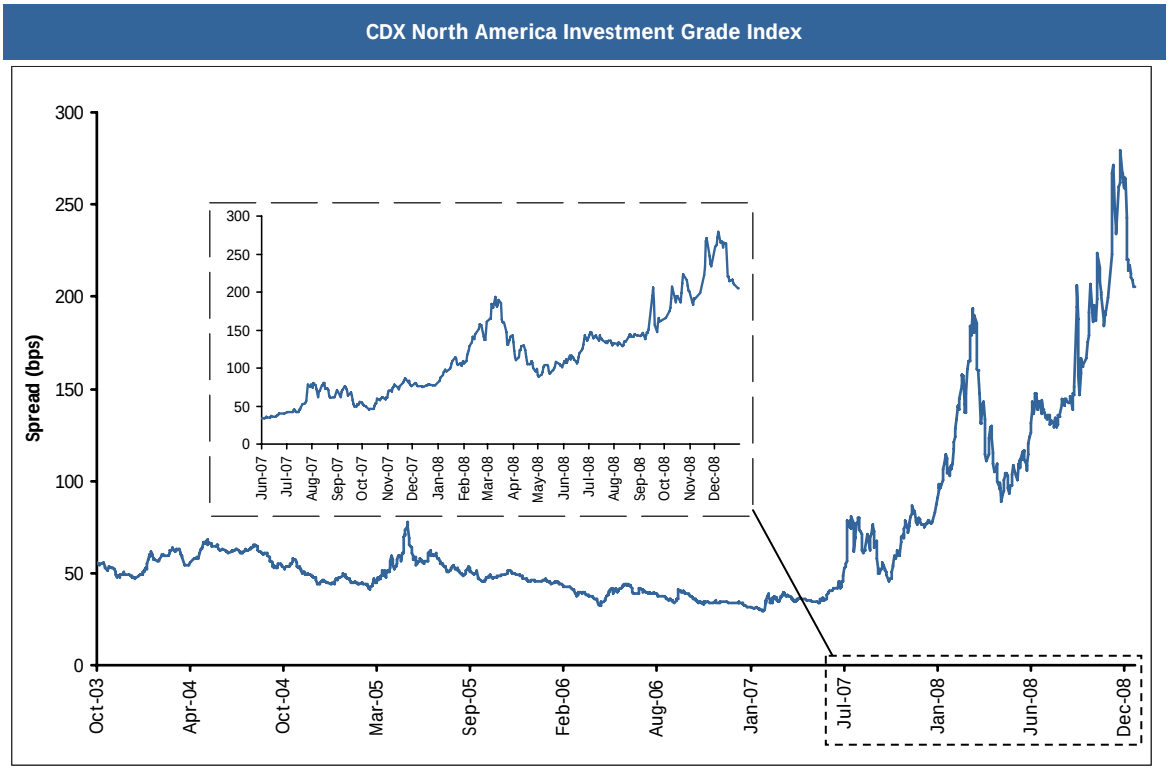
S&P/LSTA U.S. Leveraged Loan 100 Index
January 2, 2002 through December 31, 2008



Source: Standard & Poor's.

The S&P/Loan Syndications and Trading Association U.S. Leveraged Loan 100 Index is designed to reflect the pricing of the largest credit facilities in the leveraged loan market. It mirrors the market-weighted performance of the largest institutional leveraged loans based upon market weightings, spreads, and interest payments. As illustrated in the figure above, the health of the institutional loan market began to deteriorate in late 2007 and dramatically worsened in 2008. The U.S. Leveraged Loan 100 Index is yet another indicator of the current fragile state of the lending environment. The steep fall in value depicts both losses to bank lenders and other loan investors as well as the increasingly precarious financial stability of the borrowers (diminished loan value signifies increased bankruptcy risk).

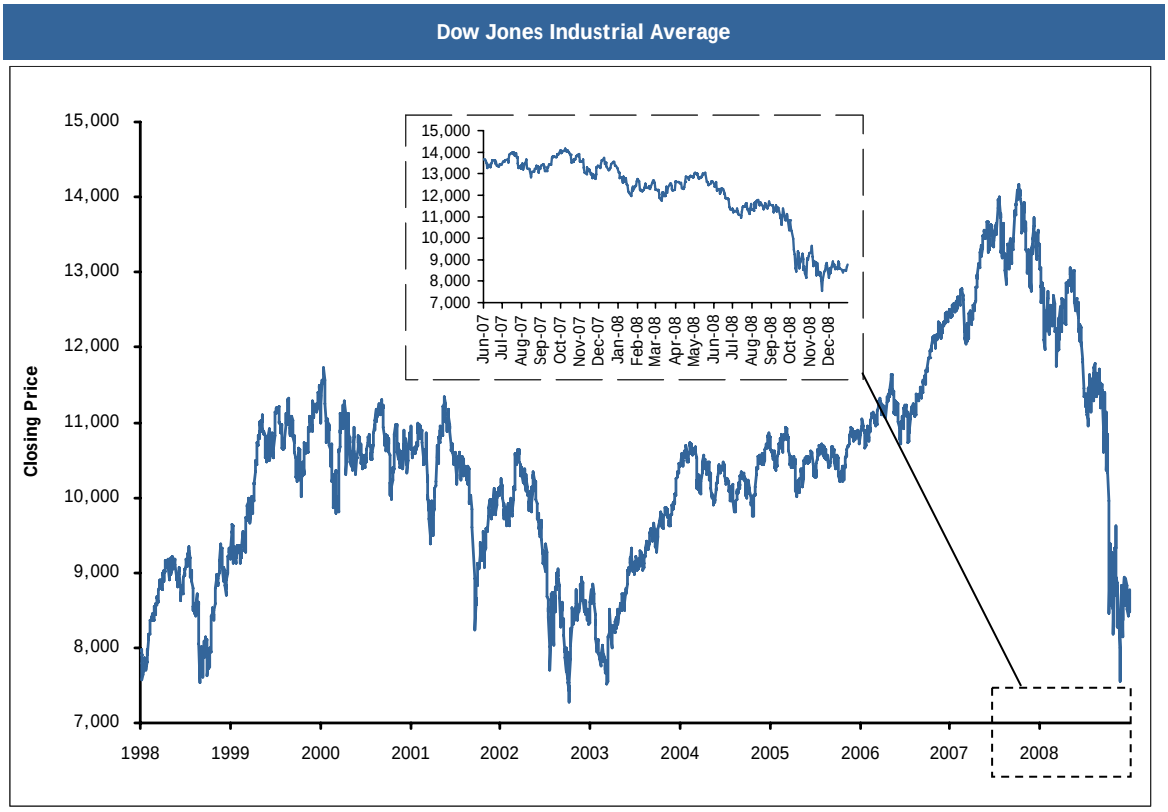
Credit Default Swaps Index
October 29, 2003 through December 31, 2008



Source: Bloomberg.

The CDX North America Investment-Grade Index is composed of credit default swaps of 125 companies in the U.S. and Canada. The index, used to hedge against losses or to speculate on the ability of companies to repay their debt, rises as investor confidence deteriorates. A basis point on a CDS contract protecting $10 million of debt from default for five years is equivalent to $1,000 a year. As demonstrated in the figure above, CDX North America Investment-Grade Index levels have drastically increased during the recent credit crisis indicating heightened fear of corporate defaults.

Equity Markets – Dow Jones Industrial Average
January 2, 1998 through December 31, 2008



Source: Bloomberg.

Stock prices are an important component of public companies' ability to raise capital. The DJIA is one of several stock market indices. The DJIA is computed from the stock prices of 30 of the largest and most widely held public companies in the U.S., and is an indicator of the performance of overall equity markets. The figure above shows the historical DJIA level since 1998. On October 9, 2007, the DJIA closed at its record level of 14,164.53. The DJIA closed at 7,552.29 on November 20, 2008, its lowest point in over five years.

III. TARP Overview and Summary Term Sheets

TARP Overview and Summary Term Sheets

A. TARP Overview

On October 3, 2008, Congress passed and President Bush signed the EESA, which established the OFS within the Treasury and authorized the TARP. The TARP consists of multiple programs, including (i) the CPP implemented on October 14, 2008, (ii) the SSFI program implemented on November 10, 2008 (iii) the Automotive Industry Financing Program implemented on December 19, 2008 and (iv) the TIP implemented on December 31, 2008. The Subject Investments were made under the CPP, the SSFI program, or the TIP, as more fully described in sections III-B, III-C, and III-D, respectively.

B. Capital Purchase Program (CPP)

On October 14, 2008, the Treasury announced the voluntary CPP to encourage U.S. financial institutions to build capital, to increase the flow of financing to U.S. businesses and consumers, and to support the U.S. economy. Under the program, the Treasury made available $250 billion of capital to U.S. financial institutions. This facility allows banking organizations to apply for a preferred stock investment by the Treasury. Under the first tranche of CPP funds, the Treasury is authorized to purchase up to $250 billion of senior preferred shares on standardized terms and conditions. Thus, qualifying institutions participating in the CPP receive terms that are uniform across all institutions even though the cost of capital varies by institution. While participation in the CPP is voluntary, the terms of the CPP preferred stock and warrant securities are not negotiable.

The CPP is available to qualifying U.S. controlled banks, savings associations and certain bank and savings and loan holding companies engaged only in financial activities. The Treasury determines eligibility and allocations for interested parties after consultation with the appropriate federal banking agency. Institutions participating in the CPP must adopt the Treasury's standards for executive compensation and corporate governance for the period during which the Treasury holds equity issued under this program. These standards generally apply to the chief executive officer and the chief financial officer, plus the next three most highly compensated executive officers.

For its capital investment under the CPP, the Treasury receives two types of securities from the QFI: shares of preferred stock and warrants. The preferred stock pays a stated dividend rate of 5% per annum prior to the 5th anniversary of the issue date and 9% per annum subsequent to the 5th anniversary of the issue date. The dividends are payable quarterly in arrears on February 15, May 15, August 15 and November 15 of each year. Also, the dividends are cumulative, meaning any missed dividends accrue and must be paid. Additionally, the preferred stock ranks senior to the QFI's common stock and pari passu with the QFI's existing preferred stock, if applicable.

One unusual proviso to the amendments provision gives the Treasury the unilateral right to amend any provision of the agreement "to the extent required to comply with any changes after the Signing Date in applicable federal statutes."

The preferred stock also comes with certain restrictions, including (i) prior to the 3rd anniversary of the issue date, the preferred stock is not redeemable, except with proceeds from a "Qualified Equity Offering" that results in aggregate gross proceeds of not less than 25% of the issue price of the preferred stock. Subsequent to the 3rd anniversary of the issue date, the preferred stock is redeemable at 100% of face value at the option of the QFI (ii) prior to the 3rd anniversary of the issue date (unless the preferred stock has been redeemed in whole or the Treasury has transferred all of the preferred stock), the Treasury's consent is required for any increase in the QFI's per share common dividends and (iii) the preferred stock is non-voting other than class voting rights.

These shares of preferred stock are not unusual financial securities, as many of the participating QFIs have similar securities in their capital structures. In fact, of the nine Participating Program Participants, six have publicly traded preferred securities.

Additionally, both Goldman and Morgan Stanley recently completed preferred stock issuances in private transactions. These two transactions are more fully described and analyzed in Appendix Volume I-L.

In addition to preferred stock, the Treasury also receives warrants to purchase common stock in the QFI. The warrants allow the holder to benefit from future stock price appreciation (above the warrant exercise prices) of the respective QFIs. The number of warrants issued is 15% of the face value of the preferred stock investment divided by the exercise price for the warrants. Except for the investment in AIG, the exercise price is calculated as the 20-day trailing average price of the QFI's common stock prior to announcement of participation in the TARP. For the nine applicable Subject Investments, this calculation results in six exercise prices that were "in the money," one exercise price that was "out of the money" and two exercise prices that were "at the money," in each case based on a common stock price as of the respective valuation dates. AIG's exercise price, which was set at $2.50 and was not based on a 20-day trailing average, was also "in the money" on the valuation date.

The warrants are immediately exercisable (American-style options), have a term of ten years and are subject to anti-dilution adjustments. Somewhat unusual is the right of the QFI to reduce the number of shares of common stock underlying the warrants by half if the QFI raises 100% of the face value of the preferred stock in "Qualified Equity Offerings" before December 31, 2009. The warrants are subject to certain transfer restrictions and the QFI is required to file a shelf registration statement covering the warrants and the common stock underlying the warrants and grant the holder piggyback registration rights for the warrants and the common stock underlying the warrants.

The table below includes the CPP investments analyzed by Duff & Phelps. The terms of the CPP Preferred Stock and CPP Warrants are more fully described in the summary term sheets on the following pages.

Summary of CPP Investments Analyzed

CPP Investment Summary

Purchase Program Participant	CPP Investment		CPP Preferred Stock			CPP Warrants	
	Issued	Announced	Shares Issued	Per Share Liquidation Amount	Face Amount	Strike Price	Number
BofA	10/28/08	10/14/08	600,000	$ 25,000	$ 15,000,000,000	$ 30.79	73,075,674
Citigroup	10/28/08	10/14/08	25,000	$ 1,000,000	$ 25,000,000,000	$ 17.85	210,084,034
Goldman	10/28/08	10/14/08	10,000,000	$ 1,000	$ 10,000,000,000	$ 122.90	12,205,045
JPMorgan	10/28/08	10/14/08	2,500,000	$ 10,000	$ 25,000,000,000	$ 42.42	88,401,697
Morgan Stanley	10/28/08	10/14/08	10,000,000	$ 1,000	$ 10,000,000,000	$ 22.99	65,245,759
Wells Fargo	10/28/08	10/14/08	25,000	$ 1,000,000	$ 25,000,000,000	$ 34.01	110,261,688
USB	11/14/08	11/03/08	6,599,000	$ 1,000	$ 6,599,000,000	$ 30.29	32,679,102
PNC	12/31/08	10/24/08	75,792	$ 100,000	$ 7,579,200,000	$ 67.33	16,885,192
Total					**$ 124,178,200,000**		

Source: SEC filings

Senior Preferred (the "CPP Preferred Stock") – Summary of Key Terms

Term:	Perpetual.
Issue Size:	Not less than 1% of the QFI's risk-weighted assets. Not more than the lesser of: (i) $25 billion and (ii) 3% of the QFI's risk weighted assets.
Liquidation Preference:	$1,000 per share (the Treasury may agree to a higher liquidation preference per share).
Ranking:	Senior to common stock and pari passu with existing preferred shares other than those that rank junior to any existing preferred shares.
Dividend:	5% per annum prior to the 5th anniversary of the issue date. 9% per annum subsequent to the 5th anniversary of the issue date. Payable quarterly in arrears on 2/15, 5/15, 8/15 and 11/15 of each year.
Redemption:	Prior to the 3rd anniversary of the issue date, not redeemable, except with proceeds from a Qualified Equity Offering that results in aggregate gross proceeds of not less than 25% of the issue price of the CPP Preferred Stock. Subsequent to the 3rd anniversary of the issue date, redeemable at the option of the QFI. Redeemed at 100% of the issue price plus all accrued and unpaid dividends.
Dividend Restrictions:	If accrued and unpaid dividends are not fully paid on the CPP Preferred Stock; no dividends may be declared or paid on junior preferred shares, preferred shares ranking pari passu with the CPP Preferred shares or common shares.
Common Dividend Limits:	Prior to the 3rd anniversary of the issue date (unless the CPP Preferred Stock has been redeemed in whole or the Treasury has transferred all of the CPP Preferred Stock); Treasury consent is required for any increase in common dividends per share.

Repurchase Restrictions:	Prior to the 3rd anniversary of the issue date (unless the CPP Preferred Stock has been redeemed in whole or the Treasury has transferred all of the CPP Preferred Stock of the QFI), the Treasury's consent is required for any share repurchase (other than (a) repurchases of the CPP Preferred Stock and (b) repurchase of junior preferred shares or common shares in connection with any benefit plan consistent with past practice). No repurchases of junior preferred shares, preferred shares ranking pari passu with the CPP Preferred Stock or common shares if prohibited under "Dividend Restrictions."
Voting:	Non-voting other than class voting rights on (a) authorization or issuance of shares ranking senior to the CPP Preferred Stock, (b) amendments to the rights of the CPP Preferred Stock or (c) any transactions (e.g., mergers, exchanges) that would adversely affect the rights of the CPP Preferred Stock.
Transferability:	No restrictions on transfer. QFI to file shelf registration statement covering the CPP Preferred Stock and grant the Treasury piggyback registration rights for the CPP Preferred Stock.

Warrants (the "CPP Warrants") – Summary of Key Terms

Term: 10 years.

Exercise Price: 20-day trailing average price of the QFI's common stock prior to announcement of participation in the CPP; exercisable anytime (American-style options)

Number: Number of CPP Warrants issued such that: Exercise Price multiplied by the number of CPP Warrants is equal to 15% of the liquidation preference of the CPP Preferred Stock.

Voting: The Treasury agrees not to exercise voting power of any shares issued through exercise.

Anti-Dilution: Exercise price and number of shares issuable shall be subject to adjustment for the following:

(i) Stock splits, subdivisions, reclassifications or combinations;
(ii) Certain issuances of common shares or convertible securities (prior to the earlier of (a) the holder of the CPP Warrants is no longer the Treasury and (b) the 3rd anniversary of the issue date);
(iii) Certain repurchases of common stock;
(iv) Business combinations; and
(v) Other distributions.

Reduction: Number of shares of common stock underlying the CPP Warrants shall be reduced by 50% in the event that the QFI receives aggregate gross proceeds of not less than 100% of the issue price of the CPP Preferred Stock from one or more Qualifying Equity Offerings on or prior to December 31, 2009.

Substitution: In the event that the QFI is no longer listed or traded on a national securities exchange; exchangeable, at the option of the Treasury, for senior term debt or another security of the QFI that appropriately compensates the Treasury.

Transferability: The Treasury may transfer one-half of the CPP Warrants prior to the earlier of (a) December 31, 2009 and (b) the date on which the QFI has received aggregate gross proceeds of not less than 100% of the issue price of the CPP Preferred Stock from one or more Qualifying Equity Offerings.

QFI to file shelf registration statement covering the CPP Warrants and the common stock underlying the CPP Warrants and grant the Treasury piggyback registration rights for the CPP Warrants and the common stock underlying the CPP Warrants.

C. Systemically Significant Failing Institution (SSFI) Program

The Treasury has authority to determine eligibility of participants and allocation of resources under the EESA pursuant to the SSFI program. Unlike the broad-based CPP, financial institutions are considered for participation in the SSFI program on a case-by-case basis. There is no deadline for participation in this program.

According to the Treasury, the primary objective of the SSFI program is to provide stability and prevent disruption to financial markets in order to limit the impact on the economy and protect American jobs, savings and retirement security from the failure of a systemically significant institution. In an environment of substantially reduced confidence, severe strains and high volatility in financial markets, the disorderly failure of a systemically significant institution could impose significant losses on creditors and counterparties, call into question the financial strength of other similarly situated financial institutions, disrupt financial markets, raise borrowing costs for households and businesses and reduce household wealth. The resulting financial strains could threaten the viability of otherwise financially sound businesses, institutions and municipalities, resulting in adverse spillovers on employment, output and income.

Summary of SSFI Investments Analyzed

On November 10, 2008, AIG announced agreements with the Treasury and the Federal Reserve to establish a "durable capital structure" for AIG and facilities designed to resolve the liquidity issues AIG had experienced in its credit default swap portfolio and its U.S. securities lending program. The Treasury agreed to purchase, under the terms of the SSFI program, $40 billion in senior preferred stock and warrants to purchase a number of shares of common stock of AIG equal to 2% of AIG's issued and outstanding shares as of the purchase date. The Treasury's investment in AIG was made on November 25, 2008.

The primary differences between the SSFI AIG investment terms and the CPP investment terms are:

1. The SSFI AIG Preferred Stock's stated dividend is 10% per annum with no step up after five years;
2. The number of warrants issued is the number of shares of common stock of AIG equal to 2% of the issued and outstanding shares of AIG as of the purchase date; and
3. There is no provision to reduce the number of shares of common stock underlying the warrants by half if AIG completes a Qualifying Equity Offering on or prior to December 31, 2009.

The SSFI AIG investment analyzed by Duff & Phelps is summarized in the table on the following page. The terms of the SSFI AIG Preferred Stock and SSFI AIG Warrants are more fully described in the summary term sheets on the following pages.

SSFI Investment Summary

Purchase Program Participant	SSFI Investment		SSFI Preferred Stock			SSFI Warrants	
	Issued	Announced	Shares Issued	Per Share Liquidation Amount	Face Amount	Strike Price	Number
AIG	11/25/08	11/10/08	4,000,000	$ 10,000	$ 40,000,000,000	$ 2.50	53,798,766
Total					**$40,000,000,000**		

Source: SEC filings

SSFI AIG Investment

SSFI AIG Preferred Stock – Summary of Key Terms

Term:	Perpetual.
Issue Size:	$40 billion; 4 million shares.
Liquidation Preference:	$10,000 per share.
Ranking:	Senior to common stock and pari passu with existing preferred shares other than those that rank junior to the SSFI AIG Preferred.
Dividend:	10% per annum, cumulative. Payable quarterly in arrears on 2/1, 5/1, 8/1 and 11/1 of each year.
Redemption:	Redeemed at 100% of the liquidation preference plus all accrued and unpaid dividends.
Dividend Restrictions:	If accrued and unpaid dividends are not fully paid on the SSFI AIG Preferred Stock, no dividends may be declared or paid on junior preferred shares, preferred shares ranking pari passu with the SSFI AIG Preferred shares ("Parity Stock") or common shares.
Common Dividend Limits:	Prior to the 5th anniversary of the issue date (unless the SSFI AIG Preferred Stock has been redeemed in whole or the Treasury has transferred all of the SSFI AIG Preferred Stock), Treasury's consent is required for any increase in common dividends per share.
Repurchase Restrictions:	Prior to the 5th anniversary of the issue date (unless the SSFI AIG Preferred Stock has been redeemed in whole or the Treasury has transferred all of the SSFI AIG Preferred Stock), the Treasury's consent is required for any share repurchase (other than (a) repurchases of the SSFI AIG Preferred Stock (b) repurchase of junior preferred shares or common shares ("AIG Junior Stock") in connection with any benefit plan consistent with past practice (c) any redemption or repurchase of rights pursuant to any stockholders' rights plan and (d) the exchange or conversion of AIG Junior Stock for or into other AIG Junior Stock or of AIG Parity Stock or trust preferred securities for or into other Parity Stock or Junior Stock.)
Voting:	Non-voting other than class voting rights on (a) authorization or issuance of shares ranking senior to the SSFI AIG Preferred Stock (b) any amendment that adversely effects the rights of the SSFI AIG Preferred Stock or (c) any transactions (e.g., mergers, exchanges) that would adversely affect the rights of the SSFI AIG Preferred Stock.

Transferability: No restrictions on transfer other than such as are necessary to ensure compliance with U.S. federal and state securities laws.

AIG to file a registration statement (which may be a shelf registration statement) covering the SSFI AIG Preferred Stock and grant the Treasury piggyback registration rights for the SSFI AIG Preferred Stock.

SSFI AIG Warrants – Summary of Key Terms

Term: 10 years.

Exercise Price: $2.50 (par value of AIG common stock); exercisable anytime (American-style options)

Number: 53,798,766 (2% of the outstanding shares of common stock as of the issue date).

Voting: The Treasury agrees not to exercise voting power of any shares issued through exercise.

Anti-Dilution: Exercise price and number of shares issuable shall be subject to adjustment for the following:

(i) Stock splits, subdivisions, reclassifications or combinations;
(ii) Certain issuances of common shares or convertible securities (prior to the earlier of (a) the holder of the SSFI AIG Warrants is no longer the Treasury and (b) the 3rd anniversary of the issue date);
(iii) Certain repurchases of common stock;
(iv) Business combinations; and
(v) Other distributions.

Reduction: None.

Substitution: In the event that AIG is no longer listed or traded on a national securities exchange, exchangeable, at the option of the Treasury, for economic interest of AIG classified as permanent equity under GAAP with a fair market value (as determined by the Treasury) equal to the portion of the warrants exchanged.

Transferability: No restrictions on transfer other than those necessary to ensure compliance with U.S. federal and state securities laws.

AIG to file a registration statement (which may be a shelf registration statement covering the SSFI AIG Warrants and the AIG common stock underlying the SSFI AIG Warrants) and grant the Treasury piggyback registration rights for the SSFI AIG Warrants and the AIG common stock underlying the SSFI AIG Warrants.

D. Target Investment Program (TIP)

The Treasury will determine eligibility of participants and allocation of resources under the EESA pursuant to the TIP. Unlike the broad-based CPP but similar to the SSFI program, financial institutions will be considered for participation in the TIP on a case-by-case basis. There is no deadline for participation in this program.

According to the Treasury, the objective of the TIP is to provide financial market stability and thereby strengthen the economy and protect American jobs, savings and retirement security. In an environment of high volatility and severe financial market strains, the loss of confidence in a financial institution could result in significant market disruptions that threaten the financial strength of similarly situated financial institutions and thus impair broader financial markets and pose a threat to the overall economy. The resulting financial strains could threaten the viability of otherwise financially sound businesses, institutions and municipalities, resulting in adverse spillovers on employment, output and incomes.

Summary of TIP Investments Analyzed

On November 24, 2008, the Treasury announced an agreement in principal for a $20 billion purchase of preferred shares and warrants of Citigroup under the TIP. The Citigroup TIP investment closed on December 31, 2008.

The primary differences between the TIP Citigroup investment terms and the CPP investment terms are:

1. The TIP Citigroup Preferred Stock's stated dividend is 8% per annum with no step up after five years;
2. The number of warrants issued is 10% of the face value of the preferred stock investment divided by the exercise price for the warrants; and
3. There is no provision to reduce the number of shares of common stock underlying the warrants by half if Citigroup completes a Qualifying Equity Offering on or prior to December 31, 2009.

The TIP investment analyzed by Duff & Phelps is summarized in the following table. The terms of the TIP Citigroup Preferred Stock and TIP Citigroup Warrants are more fully described in the summary term sheets on the following pages.

TIP Investment Summary

	TIP Investment		TIP Preferred Stock			TIP Warrants	
Purchase Program Participant	Issued	Announced	Shares Issued	Per Share Liquidation Amount	Face Amount	Strike Price	Number
Citigroup	12/31/08	11/24/08	20,000,000	$ 1,000	$ 20,000,000,000	$ 10.61	188,501,414
Total					**$20,000,000,000**		

Source: SEC filings

TIP Citigroup Investment

TIP Citigroup Preferred Stock – Summary of Key Terms

Term:	Perpetual.
Issue Size:	$20 billion; 20 million shares.
Liquidation Preference:	$1,000 per share.
Ranking:	Senior to common stock and pari passu with existing preferred shares other than those that rank junior to any existing preferred shares.
Dividend:	8% per annum, cumulative. Payable quarterly in arrears on 2/15, 5/15, 8/15 and 11/15 of each year.
Redemption:	Not redeemable prior to the redemption or repurchase of Citigroup's preferred shares issued under the CPP on November 28, 2008. Redeemed at 100% of the liquidation preference plus all accrued and unpaid dividends.
Dividend Restrictions:	If accrued and unpaid dividends are not fully paid on the TIP Citigroup Preferred Stock; no dividends may be declared or paid on junior preferred shares, preferred shares ranking pari passu with the TIP Citigroup Preferred shares or common shares.
Common Dividend Limits:	For three years, without the Treasury's consent, Citigroup is prohibited from paying common stock dividends, in excess of $0.01 per share per quarter.
Repurchase Restrictions:	Prior to the 3rd anniversary of the issue date (unless the TIP Citigroup Preferred Stock has been redeemed in whole or the Treasury has transferred all of the TIP Citigroup Preferred Stock), the Treasury's consent is required for any share repurchase (other than (a) repurchases of the TIP Citigroup Preferred Stock and (b) repurchase of junior preferred shares or common shares in connection with any benefit plan consistent with past practice). No repurchases of junior preferred shares, preferred shares ranking pari passu with the TIP Citigroup Preferred Stock or common shares if prohibited under "Dividend Restrictions."
Voting:	Non-voting other than class voting rights on (a) authorization or issuance of shares ranking senior to the TIP Citigroup Preferred Stock (b) amendments to the rights of the TIP Citigroup Preferred Stock or (c) any transactions (e.g., mergers, exchanges) that would adversely affect the rights of the TIP Citigroup Preferred Stock.

Transferability:	No restrictions on transfer. Citigroup to file shelf registration statement covering the TIP Citigroup Preferred Stock and grant the Treasury piggyback registration rights for the TIP Citigroup Preferred Stock.

TIP Citigroup Warrants – Summary of Key Terms

Term: 10 years.

Exercise Price: $10.61 (20-day trailing average price of Citigroup common stock prior to the announcement date of November 24, 2008); exercisable anytime (American-style options)

Number: 188,501,414.
Product of (a) Exercise Price and (b) number of warrants to equal $2.0 billion (10% of the $20 billion investment).

Voting: The Treasury agrees not to exercise voting power of any shares issued through exercise.

Anti-Dilution: Exercise price and number of shares issuable shall be subject to adjustment for the following:

(i) Stock splits, subdivisions, reclassifications or combinations;
(ii) Certain issuances of common shares or convertible securities (prior to the earlier of (a) the holder of the TIP Citigroup Warrants is no longer the Treasury, and (b) the 3rd anniversary of the issue date);
(iii) Certain repurchases of common stock;
(iv) Business combinations; and
(v) Other distributions.

Reduction: None.

Substitution: In the event that Citigroup is no longer listed or traded on a national securities exchange, exchangeable, at the option of the Treasury, for economic interest of Citigroup classified as permanent equity under GAAP with a fair market value (as determined by the Treasury) equal to the portion of the warrant exchanged.

Transferability: No restrictions on transfer.
Citigroup to file shelf registration statement covering the TIP Citigroup Warrants and the common stock underlying the TIP Citigroup Warrants and grant the Treasury piggyback registration rights for the TIP Citigroup Warrants and the common stock underlying the TIP Citigroup Warrants.

IV. Valuation Methodologies

Valuation Methodologies

A. Methodology Overview

The scope of Duff & Phelps' engagement is to estimate the Fair Market Value of the TARP Preferred Stocks and the TARP Warrants as of the valuation dates for the respective Subject Investments. Since the TARP Preferred Stocks and the TARP Warrants are not publicly traded, our fundamental approach to valuing these securities is to use data obtained from the public debt, equity and derivatives markets to estimate certain parameters, such as discount rates, volatility and default assumptions. All of the Purchase Program Participants have common stock that is publicly traded, and most of the Purchase Program Participants have debt and preferred securities that are publicly traded (see Appendix Volume II-C). In addition, CDSs for all but one of the Purchase Program Participants (PNC) are also publicly traded (see the Company Overviews of each Purchase Program Participant in Appendix Volume I-A through I).

Most issuers, investors and valuation practitioners believe that security prices determined in the financial markets provide the best indications of economic value. The turmoil in the financial markets leading to the TARP (outlined in section II), however, has created some concern that transaction prices are not always reliable indicators of fair values. To mitigate this concern, we have: (i) used several different valuation approaches; (ii) analyzed numerous publicly traded debt and preferred stock securities; and (iii) analyzed certain major market transactions which occurred during the relevant time period. In no case, however, do we attempt to assess whether the observed prices are consistent with other conceptions of fundamental value. The trading data for the publicly traded debt and preferred stock securities is in Appendix Volume II-A, C and D and the trading histories for CDS spreads are contained in the overviews of each Purchase Program Participant.

TARP Preferred Stock

We selected three methodologies to value the TARP Preferred Stocks:

1. Yield-Based DCF Approach

   The TARP Preferred Stocks are perpetual securities that are callable by the issuer. Therefore, the holder of the TARP Preferred Stock (i) is long a perpetual security and (ii) is short (has sold or written) a call option on the perpetual security. In the Yield-Based DCF Approach, we valued each of the components (i) and (ii) by analyzing the observed yields on other publicly traded preferred and debt securities issued by the Purchase Program Participants. Therefore, this approach allows direct comparisons of the TARP Preferred Stocks with very similar securities.

   We performed our valuation of the perpetual component of the TARP Preferred Stocks by discounting the contractual cash flows (dividends) at a discount rate which reflects the risk of each TARP Preferred Stock. This discount rate was derived from the OAYs on the Purchase Program Participants' publicly traded securities. We describe our determination of the appropriate discount rate in greater detail later in this section. We valued the call option (which is a negative value to the holder of the TARP Preferred Stocks) using methodologies that we describe in greater detail in Appendix Volume III-B.

2. Contingent Claims Analysis

   In CCA, a firm's securities can be modeled as derivative securities on its assets. In the simplest case, a firm has one debt instrument outstanding which is zero coupon debt. Upon maturity, if the asset value exceeds the face value of debt, the residual value belongs to the equity holders. Therefore, the equity of the company can be valued as a call option on the assets of the company. The strike price of the option is the face value of the debt and the maturity of the option equals the maturity of the debt.

3. CDS-Based DCF Approach

   This approach is a DCF analysis using as its information base CDS rates. These rates are akin to bond spreads and provide direct observation on the market's perception of the credit risk of the Purchase Program Participants. The CDS market is highly liquid and that makes the CDS rates potentially very attractive in assessing credit risk. However, as the rates are for bonds issued by the companies, we must modify them in order to apply them to the valuation of the TARP Preferred Stocks. We apply the standard approach to using CDS rates to value fixed income securities; that is, we use the CDS rates to infer the adjustment to the promised cash flows that incorporates both the probability of default and the risk premium that default requires. We estimate the Fair Market Value of the TARP Preferred Stocks as the sum of the present value of the probability adjusted cash flows.

TARP Warrants

For the valuation of the TARP Warrants, we utilized an options pricing approach implemented with a Monte Carlo simulation, which readily accommodates time-varying interest rates and volatilities and incorporates adjustments to account for the issuer's ability to cancel one-half the warrants through a "Qualifying Equity Offering." We discuss this methodology in more detail in Appendix Volume III–D.

Valuation Date

Our valuation dates are the first trading dates following the announcement of the Subject Investments purchased by the Treasury. These are the first dates that the financial markets would have incorporated information related to the purchases. The valuation dates are as summarized in the following table:

Subject Investments

Purchase Program Participant	Valuation Date	Investment Amount	TARP Program
American International Group, Inc.	11/10/08	$40.0	SSFI
Bank of America Corporation	10/14/08	$15.0	CPP
Citigroup Inc.	10/14/08	$25.0	CPP
Citigroup Inc.	11/24/08	$20.0	TIP
The Goldman Sachs Group, Inc.	10/14/08	$10.0	CPP
JPMorgan Chase & Co.	10/14/08	$25.0	CPP
Morgan Stanley	10/14/08	$10.0	CPP
The PNC Financial Services Group	10/24/08	$7.6	CPP
U.S. Bancorp	11/3/08	$6.6	CPP
Wells Fargo & Company	10/14/08	$25.0	CPP
	Total	**$184.2**	

Notes: $ in billions.

We note that the market data that we used for our analysis – the publicly traded securities of the Purchase Program Participants – extends four days beyond each of the valuation dates. We used this time period to ensure that the trading volume in each of the securities was sufficient to meet our selection criteria, which is described later in this section.

B. Market Transactions

There were a number of private sector investments in U.S. financial institutions as well as transactions involving investments in non-U.S. financial institutions by private investors and governments of other countries during the period from June 2007 to October 2008. Several of the transactions involving U.S. financial institutions included certain Purchase Program Participants. These transactions are summarized in the following table:

Market Transactions

Subject Company / Investor	Announce Date	Transaction Amount (millions)	Securities
Countrywide / Bank of America	8/22/07	$2,000	convertible preferred stock
Fannie Mae / Institutional Investors	9/25/07	$1,000	preferred stock
Washington Mutual / Institutional Investors	10/25/07	$1,000	preferred stock
Citigroup / ADIA	11/26/07	$7,500	common stock and trust preferred stock
Morgan Stanley / China Investment Corporation	12/19/07	$5,579	common stock and trust preferred stock
Citigroup, Inc. / Government of Singapore Investment Corporation, Kuwait Investment Authority and others	1/15/08	£12,500	convertible preferred stock
Merrill Lynch / Kuwait Investment Authority, Mizuho Corporate Bank, and others	1/15/08	$6,600	convertible preferred stock
Washington Mutual / TPG and others	4/7/08	$7,200	common stock, preferred stock and warrants
Wachovia / Institutional Investors	4/14/08	$7,000	common stock and convertible preferred stock
National City / Corsair Capital LLC, TPG-Axon Capital Management, L.P., and others	4/20/08	$7,000	common stock, preferred stock and warrants
CIT / Institutional Investors	4/21/08	£1,500	common stock and convertible preferred stock
Goldman Sachs / Berkshire Hathaway	9/23/08	$5,000	preferred stock and warrants
Morgan Stanley / MUFG	9/29/08	$9,000	convertible and non-convertible preferred stock
Royal Bank of Scotland plc / U.K. Government and existing shareholders	10/13/08	£20,000	ordinary shares and preference shares
Lloyds TSB Group plc / U.K. Government and existing shareholders	10/13/08	£5,500	ordinary shares and preference shares
HBOS plc / U.K. Government and existing shareholders	10/13/08	£11,500	ordinary shares and preference shares
Barclays / Qatar Holding and Abu Dhabi	10/31/08	£7,050	mandatorily convertible notes, reserve capital instruments and warrants

Source: Capital IQ.

Duff & Phelps analyzed these transactions in the context of our overall valuation analysis of the TARP Preferred Stocks and TARP Warrants. While analyzing comparable transactions can often provide useful valuation insights, we believe that in the case of the TARP Preferred Stocks and TARP Warrants there are certain limitations in the comparability of such transactions that should be noted. Specifically, with respect to the investments in U.S. financial institutions, comparability is limited since (i) they were completed before the adoption of the EESA on October 3, 2008, when the financial crisis was still developing and (ii) with the exception of the Goldman-Berkshire Hathaway and Morgan Stanley-MUFG transactions, they were completed well before October 2008, when the financial crisis became most serious and the Treasury and other governments took action. With respect to the investments in non-U.S. financial institutions, comparability is limited because the transactions resulted from government intervention, not arm's-length negotiations (other than the Barclays transaction).

Key Reference Transactions

The three transactions that we believe to be most relevant for purposes of our analysis are Goldman-Berkshire Hathaway, Morgan Stanley-MUFG, and Barclays-Qatar Holding and Abu Dhabi. The first two of these involved Purchase Program Participants, and all three of them occurred in the fall of 2008, after Lehman filed for bankruptcy and near the time of the initial announcements regarding the TARP investments.

We specifically analyzed these transactions in conjunction with our review of data obtained from the public debt, equity and derivatives markets. The purpose of this comparative analysis is to understand the difference between observed market prices and yields for publicly traded debt and preferred securities of the Purchase Program Participants versus the price paid by investors in these three private transactions. Based on our analysis of these three transactions, we believe Berkshire Hathaway and Qatar and Abu Dhabi negotiated prices that reflect significant discounts to prices suggested by publicly traded securities (for reasons discussed below); based on a similar analysis, we believe MUFG's investment in Morgan Stanley was priced near prices suggested by publicly traded securities. Given the limited number of similar sized relevant transactions, and the fact that in two of these three transactions the investors negotiated a premium price, it is our judgment that utilizing data obtained from the public debt, equity and derivatives markets is more appropriate for purposes of our valuation analysis.

These three transactions are more fully described and analyzed in Appendix Volume I-J; however, our conclusions are summarized below.

Goldman-Berkshire Hathaway

We estimated the value of Berkshire Hathaway's investment in Goldman, after application of appropriate discounts due to reduced marketability, to be at a 108% to 112% premium to the face value of the investment at the time the transaction was announced. We believe that the premium that Berkshire Hathaway was able to obtain is explained by the intangible benefit associated with Mr. Buffett.

Our view is that Berkshire Hathaway has a history of making investments at better-than-market pricing. For example, we note that on October 2, 2008, Berkshire Hathaway announced a $3 billion investment in GE. The investment in GE also included preferred stock and warrants on virtually the same terms as the Berkshire Hathaway investment in Goldman (notably, 10% dividend rate and warrants for 100% of initial investment). Since market yields for GE debt and preferred securities were also well below 10% on October 2, 2008, we believe Berkshire Hathaway's investment in GE was also priced at a discount to a public market price.

We believe that Berkshire Hathaway is able to achieve terms that are unavailable to other private investors because of Mr. Buffett's history and reputation in the capital markets. In effect, Berkshire Hathaway is offering more than just capital; it is also selling the "Buffett" name as imprimatur on the viability of the entity receiving Buffett capital.

Barclays-Qatar Holding and Abu Dhabi

We estimated the value of Qatar's and Abu Dhabi's investment in Barclays, after application of appropriate discounts due to reduced marketability, to be at a 122% to 125% premium to the face value of the investment at the time the transaction was announced. We believe that the premium that Qatar and Abu Dhabi were able to obtain is explained, in part, by the intangible benefit of remaining independent of government ownership.

At the time of Qatar's and Abu Dhabi's investment in Barclay's, the U.K. government agreed to make available to eligible U.K. banks, new capital in the form of preferred shares and common stock. The rate offered on the preferred shares was 12% until five years after issue, at which time the rate would reset quarterly to 3-month LIBOR plus 7.0%. Regarding the common stock, the U.K. government would agree to backstop a new common stock offering to the participating bank's existing shareholders. Thus, the U.K. government would purchase any common shares not purchased by the participating bank's shareholders.

In spite of the cheaper capital available from the U.K. government, Barclays proceeded to raise more expensive private capital so it could remain independent of government ownership.

Morgan Stanley-MUFG

We utilized the same OAY to analyze the MUFG investment in Morgan Stanley as we used to value to the TARP investment in Morgan Stanley. Based on this analysis and after application of appropriate discounts due to reduced marketability, we estimated the value of MUFG's investment to be at a nominal discount to the face value of the investment at the time the transaction was announced (88% to 94% of face value).

C. Yield-Based DCF Approach

Overview and Selection of Publicly Traded Securities

The TARP Preferred Stocks are perpetual securities that are callable by the issuer. Therefore, a holder of TARP Preferred Stock (i) is long a perpetual security and (ii) is short (has sold or written) a call option on the perpetual security. With the Yield-Based DCF Approach, we valued each of the components (i) and (ii) by analyzing the observed yields on other publicly traded preferred and debt securities issued by the Purchase Program Participants. Therefore, this approach allows direct comparisons of the TARP Preferred Stocks with very similar securities.

The publicly traded preferred securities that we selected for purposes of our analysis are presented in Appendix Volume II and had the following characteristics:

1. Average daily trading volume of at least 100,000 shares since June 1, 2007;
2. The security could not be a trust preferred security;
3. The dividend rate must be fixed[1]; and
4. The security could not be convertible.

The publicly traded debt securities that we selected for purposes of our analysis are presented in Appendix Volume II and had the following characteristics:

1. Trading activity occurred on the valuation date and the price was available; market pricing provided by FINRA TRACE (Trade Reporting and Compliance Engine);
2. Trading activity of at least 1,000 bonds, on average, for the valuation date and the four subsequent trading days[2];
3. The term to maturity must be between five and 10 years, and if callable, the term to worst must be greater than three years;
4. The interest rate must be fixed; and
5. The security could not be convertible.

The following table is a summary of certain leverage ratios and performance metrics for the Purchase Program Participants (as of their respective valuation dates) as well as yield spreads to the applicable CMT. For the debt securities, the yield spreads are calculated as the spread over the CMT with the same term as the debt instruments that we analyzed. For the preferred stocks, the yield spreads are calculated as the spread over the 30-year CMT. The data indicates that the pricing of publicly traded preferred stock generally falls in line with an analysis of credit statistics, such as leverage and operating performance. In addition, for a given Purchase Program Participant there should exist a yield structure whereby securities with superior priority carry lower yields. In other words, senior debt should yield less than subordinated debt which, in turn, should yield less than preferred stock. As the data in the table illustrates, this relationship generally holds except in the case of USB. We should point out that preferred stock carries tax benefits for certain holders that debt

[1] AIG has two publicly traded preferred securities with variable dividend rates; however, the dividend rates are fixed until the year 2047.

[2] Exceptions were made if the security did not trade on every subsequent day due to federal holidays. Federal holidays included November 11, 2008 (Veterans Day) and November 28, 2008 (Thanksgiving).

securities do not[3]; such tax benefits may be counteracting the priority rule in some cases. Finally, the "spread" of preferred stock yields over yields on same-issuer publicly traded debt securities appears to become more pronounced as credit quality decreases.

Credit Statistics and Yield Spreads for the Purchase Program Participants

Purchase Program Participant	Valuation Date	Leverage Ratio	Common Equity Ratio	Tier 1 Capital Ratio	Net Interest Margin	Spreads to Applicable CMT Yield		
						Senior	Sub	Preferred
American International Group, Inc.	11/10/08	8.6x	64.0%	NM	4.2%	1322 bps	NM	2151 bps
Bank of America Corporation	10/14/08	9.3x	79.1%	10.1%	2.7%	382 bps	423 bps	453 bps
Citigroup Inc. - CPP	10/14/08	13.0x	67.5%	10.6%	2.7%	430 bps	779 bps	791 bps
Citigroup Inc. - TIP	11/24/08	12.1x	57.7%	11.6%	2.9%	446 bps	753 bps	1437 bps
The Goldman Sachs Group, Inc.	10/14/08	15.8x	72.4%	NM	NM	471 bps	646 bps	NM
JPMorgan Chase & Co.	10/14/08	11.4x	80.4%	11.2%	2.6%	440 bps	414 bps	457 bps
Morgan Stanley	10/14/08	18.4x	63.3%	NM	NM	605 bps	1011 bps	NM
The PNC Financial Services Group, Inc.	10/24/08	6.4x	62.6%	13.8%	3.3%	NM	NM	NM
U.S. Bancorp	11/3/08	9.0x	71.4%	11.1%	3.6%	NM	357 bps	350 bps
Wells Fargo & Company	10/14/08	8.7x	65.8%	12.5%	4.7%	310 bps	341 bps	NM

Common Equity Ratio = Common Equity / (Common Equity + Preferred Equity); higher percentage means a greater common equity cushion
Leverage Ratio = Assets / (Assets - Liabilities); higher number means more leverage
Tier 1 Capital Ratio = Tier 1 Capital / Total Risk-Adjusted Assets
Net Interest Margin = Net Interest Income / Average Earning Assets; for AIG, calculation is net operating income margin
bps = basis points
CMT = Constant Maturity Treasury; Treasury securitity with the same term as the subject security
Sources: SNL, Capital IQ, Bllomberg and SEC Filings.

We performed our valuation of the perpetual component of the TARP Preferred Stocks by discounting contractual cash flows (dividends) at a discount rate which reflects the risk of each TARP Preferred Stock. The discount rate that we determined for each of the TARP Preferred Stocks is comprised of the 30-year CMT yield as of the valuation date plus a spread. We determined the appropriate spread from an analysis of the publicly traded preferred and debt securities of the Purchase Program Participants.

Calculation of OASs for Publicly Traded Preferred Stocks

As we stated previously, the publicly traded preferred securities are generally callable by the issuers. The call option is negative from the holder's perspective because the issuer of the security can call the security away from the holder, and presumably would do so when it is economical for the issuer and uneconomical for the holder. Thus, the call option lowers the value of the security and raises its indicated yield. The spreads that we observe (and that are presented in the table above), therefore, are inflated by the existence of call options. The size of this effect depends on the trading price and terms for each security. We adjusted the observed spreads to remove the call option effect, resulting in what is termed an "option-adjusted spread" (the methodology behind these calculations is described in detail in Appendix Volume III-B). The resulting OASs plus the 30-year CMT yield results in the discount rate that one would apply to the contractual cash flows (dividends) of each of the public securities to value such securities as non-callable perpetuities. The table below shows

[3] Institutions investing in preferred stock can exclude from taxable income 70% of the dividends they receive. This creates a significant tax advantage for preferred stock dividends versus interest income on debt securities. For example, an investing institution should be indifferent between a bond paying 8.00% and a preferred stock with a 5.45% dividend if the bond and the preferred stock had exactly the same risk profile.

the publicly traded preferred stocks of the Purchase Program Participants that met our selection criteria, the yields implied by the trading price on the valuation date, the spreads over the 30-year CMT yield and the OASs.

Publicly Traded Preferred Stocks

Purchase Program Participant	Valuation Date	Dividend Rate	Yield	30-yr CMT	Spread to 30-yr CMT	Call Option Adjustment	OAS
American International Group, Inc.	11/10/08	6.450%	25.080%	4.210%	2087 bps	0 bps	2087 bps
American International Group, Inc.	11/10/08	7.700%	26.360%	4.210%	2215 bps	0 bps	2215 bps
Bank of America Corporation	10/14/08	6.625%	8.580%	4.270%	431 bps	-29 bps	402 bps
Bank of America Corporation	10/14/08	7.250%	8.780%	4.270%	451 bps	-34 bps	417 bps
Bank of America Corporation	10/14/08	8.200%	8.830%	4.270%	456 bps	-21 bps	435 bps
Bank of America Corporation	10/14/08	6.204%	9.020%	4.270%	475 bps	-48 bps	427 bps
Citigroup Inc.	10/14/08	8.500%	11.900%	4.270%	763 bps	-25 bps	738 bps
Citigroup Inc.	10/14/08	8.125%	12.460%	4.270%	819 bps	-16 bps	803 bps
Citigroup Inc.	11/24/08	8.500%	17.640%	3.780%	1386 bps	-5 bps	1381 bps
Citigroup Inc.	11/24/08	8.125%	18.670%	3.780%	1489 bps	-2 bps	1487 bps
JPMorgan Chase & Co.	10/14/08	8.625%	8.840%	4.270%	457 bps	-67 bps	390 bps
U.S. Bancorp	11/3/08	7.875%	7.890%	4.330%	356 bps	-69 bps	287 bps

Souce: Bloomberg and Duff & Phelps calculations.

Determination of OASs for the TARP Preferred Stocks

For those Purchase Program Participants who have publicly traded preferred securities that met our selection criteria (i.e., those in the table above), we relied heavily on the OASs that we calculated for such securities to anchor our determination of a selected range of OASs. In addition, we also: (i) compared the subject company's credit statistics to those of other Purchase Program Participants (see Appendix Volume II-B); (ii) considered the yield spreads on the subject company's publicly traded unsecured debt securities and senior subordinated debt securities; and (iii) considered the OASs calculated for securities issued by other Purchase Program Participants.

The TARP Preferred Stocks also have other features that make them slightly different from most of the publicly traded preferred stocks, and thus additional adjustments to the OASs are necessary. The most significant of these is that the TARP Preferred Stocks are cumulative with respect to dividends while most of the publicly traded preferred stocks are non-cumulative (JPMorgan has several cumulative issues, but these securities did not trade in volumes high enough to meet our selection criteria). "Non-cumulative" means that an issuer can "skip" a dividend payment and never have to pay it, while "cumulative" means that if the issuer misses a dividend payment, that payment must be paid in the future under certain conditions. In general, investors in cumulative preferred stock should be willing to accept a lower yield than on an otherwise identical non-cumulative stock. One study has suggested that there may be a 30 basis point to 120 basis point premium in yields for non-cumulative preferred stocks versus cumulative preferred stocks.[4] For issuers of higher credit quality the difference in yield between cumulative and non-cumulative preferred stocks may be

[4] Bajaj, M., Mazumdar, S. and Sarin, A. (2000) "Cost of Issuing Preferred Stock: An Empirical Analysis."

somewhat muted due to a lower probability that the issuer would suspend preferred stock dividends. For those Purchase Program Participants of higher credit quality – BofA, JPM, Citigroup as of October 14, 2008 (we believe Citigroup's credit quality deteriorated substantially between October 14, 2008 and November 24, 2008), and USB as of November 3, 2008 – we concluded that the appropriate adjustment for the cumulative nature of the TARP Preferred Stock dividend would result in a lower required OAY of about 50 basis points to 75 basis points. For those Purchase Program Participants of lower credit quality – AIG and Citigroup as of November 24, 2008 – we concluded that the appropriate adjustment for the cumulative nature of the TARP Preferred Stock dividend would result in a lower required OAY of about 75 basis points to 100 basis points.

For those Purchase Program Participants who do not have publicly traded preferred securities that met our selection criteria, we: (i) compared the subject company's credit statistics to those of other Purchase Program Participants (see Appendix Volume II-B); (ii) considered the yield spreads on the subject company's publicly traded senior unsecured debt securities and subordinated debt securities; and (iii) considered the OASs calculated for securities issued by other Purchase Program Participants. Our analysis is described below.

Goldman

Goldman's publicly traded preferred stock did not trade in volumes that met our selection criteria. Our analysis considered, but was not limited to, the following as of the October 14, 2008 valuation date for TARP Goldman Preferred Stock:

- Goldman's subordinated debt traded at a spread of about 646 basis points over the applicable CMT yield, which is about 133 basis points lower than Citigroup's subordinated debt spreads and about 223 basis points higher than BofA's subordinated debt spreads.

- Goldman had higher leverage ratios than both BofA and Citigroup, which is to be expected since it was not subject to regulatory capital requirements at the time. Goldman had a greater percentage of common equity in its capital structure than did Citigroup, however, and a lesser percentage than did BofA. This means that the capital junior to the Treasury's TARP Preferred Stock was slightly higher for the Goldman TARP Preferred Stock versus Citigroup and slightly lower as compared to BofA. (All else equal, an investor in the TARP Preferred Stock would want as high a ratio as possible to provide the maximum cushion for common stock to absorb losses prior to the TARP Preferred Stock's claim being impaired.) Such credit analysis supports the observed spreads for each of the three Purchase Program Participant's subordinated debt.

Therefore, we chose a range of OASs for the TARP Goldman Preferred Stock that was 200 basis points higher than the range we chose for BofA and 125 basis points to 150 basis points lower than the range for Citigroup.

Morgan Stanley

Morgan Stanley does not have publicly traded preferred stock. Our analysis considered, but was not limited to, the following as of the October 14, 2008 valuation date for the TARP Morgan Stanley Preferred Stock:

- The spreads on Morgan Stanley's senior debt securities were at about a 134 basis point premium to those of Goldman, while the spread on Morgan Stanley's subordinated debt securities were at a 365 basis point premium to Goldman's.

- It is our opinion that Morgan Stanley's preferred spreads should be even wider than its subordinated debt spreads (versus Goldman's) due to the fact that Morgan Stanley has the highest leverage ratio and one of the lowest percentages of common equity to total common and preferred equity.

Therefore, the range of our OAS selection for the TARP Morgan Stanley Preferred Stock is 375 basis points to 400 basis points higher than that of Goldman.

PNC

PNC does not have publicly traded preferred stock and its public debt did not trade at volumes that met our selection criteria. Our analysis considered, but was not limited to, the following as of the October 24, 2008 valuation date for the TARP PNC Preferred Stock:

- An examination of credit ratios reveals that PNC has a low leverage ratio, which would tend to move our spread selection lower. On the other hand, PNC also has a low ratio of common equity to total preferred and common equity, which means that there is less of a "cushion" provided by common equity. Therefore, we concluded that PNC's credit quality would be slightly worse than that of BofA and JPMorgan, but better than Citigroup's.

- BofA's OASs on its preferred stock was about 465 basis points and JPMorgan's OAS was about 400. If we make similar adjustments for cumulative versus non-cumulative features for this date as we did for the October 14, 2008 valuation dates for BofA and JPMorgan, we would get spreads of between 300 basis points and about 450 basis points.

Based on this analysis, we selected a spread range of 475 basis points to 550 basis points for the TARP PNC Preferred Stock, the low end of the range being 25 basis points higher than the high end of BofA's spread range as of October 24, 2008.

Wells Fargo

Wells Fargo's publicly traded preferred securities did not meet our selection criteria. Our analysis considered, but was not limited to, the following as of the October 14, 2008 valuation date for the TARP Wells Fargo Preferred Stock:

- Wells Fargo's leverage ratio is similar to USB's and its net interest margin is the highest of the commercial banks among the Purchase Program Participants. Its

common equity cushion however, was lower than USB's and similar to PNC's and Citigroup's.

- Wells Fargo's senior debt was trading at the lowest spread to the applicable CMT yield and was about 72 basis points lower than the spread on BofA's publicly traded senior debt. Wells Fargo's subordinated debt was trading to yield a 341 basis point spread over the applicable CMT yield, a spread of 82 basis points less than BofA's publicly traded subordinated debt.

Therefore, our OAS spread range selection for the TARP Wells Fargo Preferred Stock is 75 basis points less than that of BofA and 50 basis points higher than that of USB.

The table below summarizes our determination of a range of OASs derived from publicly traded preferred stock securities, adjustments for the cumulative dividend term of the TARP Preferred Stocks versus non-cumulative dividend terms for the publicly traded preferred stock securities and our concluded range of selected OASs for the TARP Preferred Stocks.

Selection of OASs for the TARP Preferred Stocks

Purchase Program Participant	Valuation Date	Range of OASs Derived from Public Preferred Stocks			Range of Adjustments for Other Factors			Range of Selected OASs Rounded to Nearest 25 bps		
American International Group, Inc.	11/10/08	2100 bps	to	2200 bps	-100 bps	to	-75 bps	2000 bps	to	2125 bps
Bank of America Corporation	10/14/08	400 bps	to	450 bps	-75 bps	to	-50 bps	325 bps	to	400 bps
Citigroup Inc. - CPP	10/14/08	725 bps	to	800 bps	-75 bps	to	-50 bps	650 bps	to	750 bps
Citigroup Inc. - TIP	11/24/08	1400 bps	to	1500 bps	-100 bps	to	-75 bps	1300 bps	to	1425 bps
The Goldman Sachs Group, Inc.	10/14/08		NA			NA		525 bps	to	600 bps
JPMorgan Chase & Co.	10/14/08	375 bps	to	425 bps	-75 bps	to	-50 bps	300 bps	to	375 bps
Morgan Stanley	10/14/08		NA			NA		900 bps	to	1000 bps
The PNC Financial Services Group, Inc.	10/24/08		NA			NA		475 bps	to	550 bps
U.S. Bancorp	11/3/08	275 bps	to	325 bps	-75 bps	to	-50 bps	200 bps	to	275 bps
Wells Fargo & Company	10/14/08		NA			NA		250 bps	to	325 bps

bps = basis points

Determination of Discount Rates and Valuation Conclusions

After determining what we believed to be the appropriate range of OASs for each of the TARP Preferred Stocks, we added the 30-year CMT yield as of the valuation dates to obtain a range of discount rates. The table below summarizes our calculations.

Selection of Discount Rates to Value the TARP Preferred Stocks as Perpetuities

Purchase Program Participant	Valuation Date	Range of Selected OASs Rounded to Nearest 25 bps			30yr CMT	Range of Concluded Discount Rates		
American International Group, Inc.	11/10/08	2000 bps	to	2125 bps	4.21%	24.21%	to	25.46%
Bank of America Corporation	10/14/08	325 bps	to	400 bps	4.27%	7.52%	to	8.27%
Citigroup Inc. - CPP	10/14/08	650 bps	to	750 bps	4.27%	10.77%	to	11.77%
Citigroup Inc. - TIP	11/24/08	1300 bps	to	1425 bps	3.78%	16.78%	to	18.03%
The Goldman Sachs Group, Inc.	10/14/08	525 bps	to	600 bps	4.27%	9.52%	to	10.27%
JPMorgan Chase & Co.	10/14/08	300 bps	to	375 bps	4.27%	7.27%	to	8.02%
Morgan Stanley	10/14/08	900 bps	to	1000 bps	4.27%	13.27%	to	14.27%
The PNC Financial Services Group, Inc.	10/24/08	475 bps	to	550 bps	4.11%	8.86%	to	9.61%
U.S. Bancorp	11/3/08	200 bps	to	275 bps	4.33%	6.33%	to	7.08%
Wells Fargo & Company	10/14/08	250 bps	to	325 bps	4.27%	6.77%	to	7.52%

bps = basis points
CMT = Constant Maturity Treasury; Treasury securitity with the same term as the subject security

Using these discount rates, we valued the contractual cash flows (dividends) for each of the TARP Preferred Stocks into perpetuity to obtain a range of values for the perpetuity component of each of the TARP Preferred Stocks. We then subtracted the value of the call option embedded in each of the TARP Preferred Stocks. Our valuation of the call options is explained in detail in Appendix Volume III-B. The results in the table below are the indications of value using the Yield-Based DCF Approach.

TARP Preferred Stock Component Values and Conclusions - Yield-Based DCF Approach ($ in billions)

Purchase Program Participant	Valuation Date	Range of Values Without the Call Options			Range of Values for Call Options (Treasury is Short)			Range of Concluded Values Yield-Based DCF Approach		
American International Group, Inc.	11/10/08	$15.7	to	$16.5	$0.0	to	$0.0	$15.7	to	$16.5
Bank of America Corporation	10/14/08	$13.9	to	$15.5	-$1.7	to	-$2.3	$12.2	to	$13.2
Citigroup Inc. - CPP	10/14/08	$15.4	to	$17.1	-$0.6	to	-$1.0	$14.7	to	$16.1
Citigroup Inc. - TIP	11/24/08	$8.9	to	$9.5	$0.0	to	$0.0	$8.9	to	$9.5
The Goldman Sachs Group, Inc.	10/14/08	$7.2	to	$7.9	-$0.5	to	-$0.6	$6.7	to	$7.2
JPMorgan Chase & Co.	10/14/08	$24.0	to	$26.8	-$3.2	to	-$4.5	$20.8	to	$22.3
Morgan Stanley	10/14/08	$4.9	to	$5.3	-$0.1	to	-$0.1	$4.8	to	$5.2
The PNC Financial Services Group, Inc.	10/24/08	$5.9	to	$6.5	-$0.5	to	-$0.7	$5.4	to	$5.8
U.S. Bancorp	11/3/08	$7.3	to	$8.3	-$1.2	to	-$1.7	$6.1	to	$6.6
Wells Fargo & Company	10/14/08	$25.8	to	$29.0	-$3.8	to	-$5.2	$22.0	to	$23.8

Sources: Based on Duff & Phelps calculations.

D. CCA Approach

The development of insights concerning option pricing created a new approach to valuing corporate securities. The famous article by Black and Scholes introduced the fundamental idea[5]: In a firm with only debt and equity financing, the equity is worth the value of the assets minus the face value of the debt as long as this is greater than zero. This is akin to owning a call option on the assets of the firm with an exercise price equal to the face value of the debt. Therefore, equity can be valued as a call option on the assets and debt can be valued as the assets minus a call option. Merton (1974) was the first to use this approach to value corporate securities.[6] This approach, which can be extended to include many complex securities, has come to be known as Contingent Claims Analysis.[7] CCA has been the subject of a large number of academic studies. It is also quite widely used in the professional valuation community. Its usefulness led to CCA being recommended in the American Institute for Certified Public Accountants Practice Guide[8], "Chapter 10: Valuation of Preferred Versus Common Stock." CCA has been studied extensively in academia and widely used in practice to investigate the timing of default and the value of contingent claims when an event of default may occur. See, for example, research by Peter Crosbie and Jeffrey Bohn, "Modeling Default Risk" conducted when they were at Moody's|KMV and research by Deborah Lucas and Robert McDonald.[9]

CCA models can vary considerably in their complexity and implementation. In some cases, they are implemented using the Black-Scholes-Merton formula. This approach has several limitations. In particular, it assumes a fixed valuation term with no default prior to the end of that term. Alternative applications of CCA, for example the work by Crosby and Bohn and by Lucas and McDonald, employ Monte Carlo simulation, which we discuss in Appendix Volume III-D. This is a very flexible methodology that models behavior and tracks changes in value through simulated time. Our CCA valuation approach follows closely to that described by Lucas and McDonald.

We modeled the evolution of the market value of the assets of each company on a monthly basis for up to ten years. The TARP Preferred Stocks received their contractual dividends on a quarterly basis unless a default occurred. Other issues of preferred stock also received their contractual dividends. When default occurred, the simulation terminated and the available assets were distributed with the TARP Preferred Stocks receiving 0% of face value. If default did not occur, then the TARP Preferred Stocks received their face values at the end of ten years.

There are a number of important determinants of value in the CCA Approach. The dividend rates on the TARP Preferred Stocks are one and they are, of course, known.

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[5] Black, Fischer and Myron Scholes. 1973. "The pricing of options and corporate liabilities." *Journal of Political Economy* 81: 637:659.

[6] Merton, Robert C. 1974. "On the pricing of corporate debt: the risk structure of interest rates." *Journal of Finance* 29:449-470.

[7] For a general overview see Whaley, Robert. 2006. *Derivatives*. See especially Chapter 12 Corporate Securities and the references there.

[8] Valuation of Privately-Held-Company Equity Securities Issued as Compensation, AICPA.

[9] Lucas, Deborah and Robert McDonald. 2006 "An options-based approach to evaluating the risk of Fannie Mae and Freddie Mac." *Journal of Monetary Economics* 53: 155-76.
Lucas, Deborah and Robert McDonald. 2008. Valuing government guarantees: Fannie and Freddie revisited, working paper, Northwestern University.

The proportion of the assets financed by each type of security (debt, preferred stock and common stock) is very influential. The lower the proportion of common stock financing the higher the frequency of default and the lower the value of the TARP Preferred Stocks. We measured the capital structure of the Purchase Program Participants in terms of the book value of debt and preferred stock and the market value of common stock. The definition of default is important because the values of the TARP Preferred Stocks increase with the length of the time period to default. We defined default as a situation in which the market value of the Purchase Program Participants' assets was less than 90% of the face value of debt. Lastly, the volatility of the assets is important because the more volatile the assets are the higher the frequency of default and the lower the value of the TARP Preferred Stocks. For each valuation, we set an initial volatility for assets and let it decrease linearly over time to a lower volatility. We valued each of the TARP Preferred Stocks using two different volatility structures. For the deposit banks we used asset volatilities beginning at 7.0% and decreasing to 6.0% and beginning at 6.0% and decreasing to 5.0%. For Goldman and Morgan Stanley, which we consider to have somewhat riskier assets, we added 0.5% to each range, producing 7.5% to 6.5% and 6.5% to 5.5%. For AIG, which has even riskier assets, we added an additional 0.5% and valued the TARP AIG Preferred Stock using asset volatilities of 13.0% to 12.0% and 12.0% to 11.0%.

The values calculated using the CCA Approach, shown in the table below, are broadly consistent with those produced by the Yield-Based DCF Approach in seven of the ten cases. In three cases - Citigroup (TIP), Morgan Stanley and AIG - the CCA Approach values these TARP Preferred Stocks at somewhat higher levels.

TARP Preferred Stock Conclusions - CCA Approach ($ in billions)

Purchase Program Participant	Valuation Date	Higher Volatility			Lower Volatility			Valuation Ranges Based on Volatility High		Valuation Ranges Based on Volatility Low
American International Group, Inc.	11/10/08	13.0%	to	12.0%	12.0%	to	11.0%	$16.0	to	$17.0
Bank of America Corporation	10/14/08	7.0%	to	6.0%	6.0%	to	5.0%	$11.8	to	$13.5
Citigroup Inc. - CPP	10/14/08	7.0%	to	6.0%	6.0%	to	5.0%	$15.2	to	$17.3
Citigroup Inc. - TIP	11/24/08	7.0%	to	6.0%	6.0%	to	5.0%	$11.6	to	$12.7
The Goldman Sachs Group, Inc.	10/14/08	7.5%	to	6.5%	6.5%	to	5.5%	$7.0	to	$8.0
JPMorgan Chase & Co.	10/14/08	7.0%	to	6.0%	6.0%	to	5.0%	$19.2	to	$21.9
Morgan Stanley	10/14/08	7.5%	to	6.5%	6.5%	to	5.5%	$6.1	to	$7.1
The PNC Financial Services Group, Inc.	10/24/08	7.0%	to	6.0%	6.0%	to	5.0%	$5.3	to	$5.9
U.S. Bancorp	11/3/08	7.0%	to	6.0%	6.0%	to	5.0%	$6.0	to	$6.8
Wells Fargo & Company	10/14/08	7.0%	to	6.0%	6.0%	to	5.0%	$22.1	to	$24.9

Source: Based on Duff & Phelps calculations.

E. CDS-Based DCF Approach

This approach is a DCF analysis using as its information base CDS rates. In this approach, the Fair Market Values of the TARP Preferred Stocks are estimated as the discounted sum of the probability adjusted cash flows. These adjustments incorporate both the probability of default and the premium the market requires to bear default risk. Using CDS rates is attractive because this is a highly liquid market with readily available and reliable price data.

CDSs are contracts in which the buyer makes periodic payments (premium) to the seller. In return, the seller pays an amount that makes the buyer whole (protection) if the underlying instrument defaults. The premium is usually expressed as a "spread," a percentage of the notional amount of the underlying instrument. Because the level of premium the CDS seller demands is a function of the risk of the underlying instrument, adjustments that incorporate both default probabilities and risk premiums can be inferred from the level of CDS spreads observed in the market. See Appendix Volume III-C for a more complete discussion of this methodology.

We apply this methodology to the TARP Preferred Stocks with two important variations. First, preferred stock is likely to experience a lower recovery rate on its face value in an event of default than is debt. Therefore, we have assumed a 0% recovery rate. Second, preferred stock can suffer a loss without an event of default if the company suspends dividends. To account for this possibility, we increased the CDS spreads. We are not aware of a specific way to adjust the amount by which a preferred spread should differ from a bond spread; therefore, we used judgment. The values shown in the table on the following page should be viewed as indications of the adjustments that would be necessary to produce values consistent with our other two valuation methods.

TARP Preferred Stock Conclusions - CDS-Based DCF Approachs ($ in billions)

Purchase Program Participant	Valuation Date	Spread to CDS Rates Low		Spread to CDS Rates High	Valuation Ranges based on Additional Spreads Low		Valuation Ranges based on Additional Spreads High
American International Group, Inc.	11/10/08	300 bps	to	400 bps	$17.0	to	$18.3
Bank of America Corporation	10/14/08	150 bps	to	250 bps	$11.3	to	$14.0
Citigroup Inc. - CPP	10/14/08	150 bps	to	250 bps	$14.9	to	$18.1
Citigroup Inc. - TIP	11/24/08	450 bps	to	550 bps	$8.7	to	$10.5
The Goldman Sachs Group, Inc.	10/14/08	150 bps	to	250 bps	$6.7	to	$8.2
JPMorgan Chase & Co.	10/14/08	150 bps	to	250 bps	$19.0	to	$23.5
Morgan Stanley	10/14/08	250 bps	to	350 bps	$4.9	to	$5.7
The PNC Financial Services Group, Inc.	10/24/08	*Insufficient Data*					
U.S. Bancorp	11/3/08	100 bps	to	200 bps	$5.3	to	$6.6
Wells Fargo & Company	10/14/08	100 bps	to	200 bps	$19.3	to	$25.1

Source: Based on Duff & Phelps calculations.

In general, for the stronger banks the spread increases are in the 100 to 250 basis points range. This level of adjustment captures reasonable value ranges for all cases except Morgan Stanley, the Citigroup TIP investment and AIG, the lower value

investments where the risk exposure of preferred stock holders may be heightened relative to the other banks.

F. Methodology Utilized in Valuing the Warrants

The TARP Warrants can be viewed as call options on the common stock of each Purchase Program Participant that have a dilutive effect on the value of the common stock. The standard approach to valuing warrants is to apply a modified form of the Black-Scholes-Merton call option pricing equation.[10] Had we applied the Black-Scholes-Merton formula, there would be one input that is both important and difficult to measure: the volatility of the stock price. We will discuss this input below.

Instead of the applying this formula, we valued the warrants using a well-established option pricing methodology, Monte Carlo simulation. There are two primary reasons for doing this. First, under the CPP, half of the warrants are cancelable in the event a Purchase Program Participant raises completes a "Qualified Equity Offering" of a certain size by December 31, 2009. Second, the volatility of the common stocks appears likely to vary over time. Monte Carlo simulation readily accommodates these considerations.

We considered two primary estimates of volatility in selecting the values used. First, we examined the historical volatility for each company over time. We considered up to ten years of data and various measurement intervals. We selected a period of time slightly less than ten years to match the availability of data for Goldman which began trading in May 1999. Second, we also considered the current volatility implied by the prices of traded options on the Purchase Program Participant's securities. These implied volatilities are available for option expiration dates up to two years in the future. They are much larger than the historic volatilities and they also decrease for later expiration dates. The following table summarizes the data on historic and implied volatilities. Based on these data and the average historic volatility, we calculated estimates of future monthly volatilities that were close to the implied volatilities, declined smoothly over time to the average historic volatility and were then constant. We illustrate the results for one of the companies in Appendix Volume III-E.

Volatility Assumptions

Purchase Program Participant	Valuation Date	Historic Volatility	Implied Volatilities			
			3 month	6 month	1 year	2 year
American International Group, Inc.	11/10/08	66.0%	162.0%	148.0%	143.0%	128.0%
Bank of America Corporation	10/14/08	28.0%	73.0%	65.0%	60.0%	49.0%
Citigroup Inc. - CPP	10/14/08	29.0%	73.0%	65.0%	60.0%	49.0%
Citigroup Inc. - TIP	11/24/08	29.0%	72.0%	63.0%	57.0%	44.0%
The Goldman Sachs Group, Inc.	10/14/08	38.0%	63.0%	56.0%	52.0%	48.0%
JPMorgan Chase & Co.	10/14/08	34.0%	60.0%	56.0%	51.0%	42.0%
Morgan Stanley	10/14/08	39.0%	117.0%	100.0%	89.0%	80.0%
The PNC Financial Services Group, Inc.	10/24/08	25.0%	60.0%	56.0%	52.0%	48.0%
U.S. Bancorp	11/3/08	30.0%	57.0%	53.0%	47.0%	35.0%
Wells Fargo & Company	10/14/08	24.0%	65.0%	56.0%	52.0%	48.0%

Source: Bloomberg.

[10] See for example Chapter 12 in Hull, John. 2003. *Options Futures and Other Derivatives.*

Conclusion

The way we include potential cancellation of one-half of the warrants is to determine whether the value of half of the warrants after one year is sufficient to pay for the cost of raising the capital necessary to meet the cancellation terms. We consider two levels of cost for the new financing, 3% and 7% of the funds raised. Whether that threshold is met depends on the stock price in one year. Therefore, within the Monte Carlo simulation we check whether after one year it is advantageous to raise capital and cancel the half the warrants based on the simulated stock price and the option value it implies. The AIG and the Citigroup TIP investments are not subject to the cancellation feature and included smaller allocations of warrants.

TARP Warrants Valuation Conclusions ($ in billions)

Purchase Program Participant	Valuation Date	50% of Total Position: No Cancellation	50% of Total Position: Refinancing Cost Threshold 3%	50% of Total Position: Refinancing Cost Threshold 7%	100% of Position w/no Cancellation
American International Group, Inc.	11/10/08	NM	NM	NM	$0.100
Bank of America Corporation	10/14/08	$0.284	$0.127	$0.227	NM
Citigroup Inc. - CPP	10/14/08	$0.938	$0.140	$0.474	NM
Citigroup Inc. - TIP	11/24/08	NM	NM	NM	$0.343
The Goldman Sachs Group, Inc.	10/14/08	$0.389	$0.079	$0.223	NM
JPMorgan Chase & Co.	10/14/08	$0.634	$0.238	$0.495	NM
Morgan Stanley	10/14/08	$0.377	$0.054	$0.133	NM
The PNC Financial Services Group, Inc.	10/24/08	$0.142	$0.066	$0.119	NM
U.S. Bancorp	11/3/08	$0.154	$0.064	$0.126	NM
Wells Fargo & Company	10/14/08	$0.634	$0.200	$0.451	NM

Source: Based on Duff & Phelps calculations.

G. Discount for Reduced Marketability

Introduction

Our baseline valuations of the Subject Investments (using the methodologies described in this section) treat the TARP Preferred Stocks and TARP Warrants as if they are readily marketable and, therefore, could be sold immediately at those values. This follows directly from our valuation approaches, which utilize inputs and assumptions derived from publicly traded securities. We believe that a buyer of the Treasury's interest in each of the Subject Investments would discount the baseline values to account for the reduced marketability of such large positions.

There is a practical argument for the existence of a discount for reduced marketability for large blocks of single securities like the TARP Preferred Stocks and the TARP Warrants. While our baseline valuations contemplate the sale of a small block of securities, the holder of a large block – in this case, the Treasury – could only liquidate its entire position in each of the Subject Investments by (i) granting price concessions (versus the per-share price of a small block) to compensate for the market disequilibrium (oversupply) its liquidations would create or (ii) selling the block piecemeal through a series of public offerings over an extended period of time. If the block is sold piecemeal, price concessions may not need to be granted, but the Treasury takes the risk that the values of the Subject Investments decline before the positions can be liquidated. This risk is termed "holding period risk."

The terms of the TARP Preferred Stocks and TARP Warrants require the issuers to promptly register the securities for sale in a public market. By virtue of this requirement, we conclude that the TARP Preferred Stocks and TARP Warrants are essentially marketable. In theory, the registration process could increase the holding period and thus the discount for reduced marketability, but is more likely subsumed within the time period required to effect a public offering. Note that in this context, "holding period" refers to the amount of time it would take to liquidate the Treasury's entire position, not the amount of time Treasury is assumed to hold the Subject Investments.

A hypothetical buyer of the Treasury's entire position in each of the Subject Investments would require compensation (through a lower price) for accepting holding period risk. Therefore, in either (i) or (ii) above, the value of the Treasury's entire position in a given Subject Investment is lower than the baseline valuation.

The factors that impact the size of the discount for reduced marketability due to holding period risk fall into two categories (i) factors that affect the duration of the holding period (or, the amount of time required to liquidate the Treasury's entire position in each of the Subject Investments) and (ii) factors that affect the degree of risk faced per unit of time during this holding period. Risk per unit of time is the volatility of an investment's total return - the propensity for an investment's actual return to differ from its expected return. An increase in either the duration of the holding period or the expected volatility of an investment's total return leads to higher discounts for reduced marketability. We discuss the probable amount of time required to liquidate the Treasury's entire position in each of the Subject Investments later in this section.

Methodologies to Estimate the Discount for Reduced Marketability for the TARP Preferred Stocks

We have considered three methods to incorporate a discount for reduced marketability for the TARP Preferred Stocks:

1. Value the TARP Preferred Stocks as if they were readily marketable and then apply a discount derived by analytical means (e.g., discount for reduced marketability).

2. Increase the discount rates used to value the TARP Preferred Stocks to account for the increased risk (relative to a readily marketable position) resulting from reduced marketability (e.g., add a premium to the required yield).

3. Value the TARP Preferred Stocks using other securities with similarly reduced marketability.

There are several limitations in estimating the appropriate discount for reduced marketability in the case of the TARP Preferred Stocks:

1. While there have been many studies performed to estimate the impact of reduced marketability for common stock, there is limited data on the appropriate discount for preferred stock. In estimating the discount, we considered studies related to common stock as well as bonds, given the fixed income nature of preferred stock.

2. Studies that attempt to measure the impact of reduced marketability on bonds typically review the yield premium associated with reduced marketability rather than the price discount to more marketable bonds. The results of these studies are communicated in basis points, which are added to the "as if marketable" discount rate. For the most part, these studies do not provide clear guidance on how to adjust the premium as yields increase (e.g., should the premium increase as the yield increases?).

3. The limitation in assessing the impact of reduced marketability by analyzing similar transactions (e.g., the Berkshire Hathaway investment in Goldman, the MUFG investment in Morgan Stanley and the Qatar and Abu Dhabi investment in Barclays) is that there are very few such transactions.

Debt Studies

Rule 144A Debt Offerings

In 2002, Miles Livingston and Lei Zhou wrote an article entitled "The Impact of Rule 144A Debt Offerings upon Bond Yields and Underwriter Fees." In the article Livingston and Zhou explained that bonds issued under Rule 144A have higher yields than publicly issued bonds, primarily due to lower liquidity, information uncertainty and weaker legal protection for investors.

The SEC allows firms to sell security issues to qualified institutional buyers under so-called Rule 144A. Rule 144A issues are not required to be registered with the SEC and may not be resold to individual investors, but may be traded between qualified institutional buyers. Rule 144A bonds may have registration rights, which require the

issuer to exchange the original Rule 144A issue for a public bond issue within a stated period of time.

Livingston and Zhou's analysis indicated that for a given bond rating, public bonds were issued at lower spreads than Rule 144A bonds:

Bond Rating	Spread Differential
A	38
BBB	42
BB	59
B	74

The higher spreads at which the Rule 144A bonds were issued reflects the notion that the issuers of the Rule 144A bonds could have issued the bonds at the same spreads as the public issuances but would have received lower prices from bidders for their Rule 144A bonds. For example, if a Rule 144A bond with a ten-year term and a 9% interest rate (equivalent to the supposed rate offered on public issuances that are alike in all respects except marketability) is valued by buyers at a yield that includes a premium of 50 basis points to 75 basis points (9.50% to 9.75%) due to the bond's reduced marketability, then the bond is priced at a discount to face value of 3% to 5%.

We believe the Livingston and Zhou study provides some insight into the level of discount appropriate for the TARP Preferred Stocks, given the fixed income nature of the investment and the presence of registration rights. This level of discount, however, would represent a lower bound for discounts applicable to the TARP Preferred Stocks due to the higher risk/volatility associated with preferred stock, the large size the Treasury's positions relative to a typical bond offering and the current state of the financial institutions industry.

Subordinated Debt Spreads

In 2004, Christopher Bianchi, Diana Hancock and Laura Kawano wrote an article entitled "Does Trading Frequency Affect Subordinated Debt Spreads?" In their study, the authors consider whether trading frequency significantly influences time-series information on large, complex, banking organizations' subordinated debt spreads. Their study included an analysis of 211 subordinated bonds issued by 22 large banks in the U.S. and concluded that more illiquid bonds traded at higher default spreads than otherwise similar liquid bonds. They found that when a bond does not receive a generic price on Bloomberg (prices constructed using the consensus method, which averages observed trading prices after dropping the highest and lowest observations) for between six months and two years, it will have a spread that is about 20 basis points higher than a bond that has traded within the last six months, and when the interval between generic prices is longer than two years, the spread will typically be 64 basis points higher than for a bond that has generic prices available within the preceding six month period.

This study generally supports the level of premiums due to reduced marketability observed in the Rule 144A debt offerings study previously described.

Restricted Stock Studies

The restricted stock studies calculate the differences observed between the prices paid for restricted stocks in private placements and the prices at which the unrestricted stocks of the same companies were trading in public markets. The restricted stocks involved in the private placements generally were unregistered "letter" stocks which were not marketable except as permitted under Rule 144 of the Securities Act of 1933, as amended. Under this rule, until 1997, unregistered stock could be sold into the public market but only after the holder satisfied a two-year holding period. The restricted stocks were identical in every way, but for their illiquidity and lack of registration, to common stocks traded on recognized public exchanges or in the over-the-counter market. In 1997, the required holding period under Rule 144 was reduced to one year; and in 2008, the required holding period under Rule 144 was reduced to six months.

Another rule change affecting restricted stock transactions came in 1990. Prior to 1990, restricted stock could be transferred in private transactions, but special filings with the SEC were required. Starting in 1990, Rule 144A was adopted, which relaxed this filing requirement, provided that both parties involved in the private transactions were qualified institutional investors. As a result of Rule 144A, a limited market emerged for restricted stocks.

The differences in prices observed between restricted and unrestricted common stocks of the same companies on the same dates can be attributed to the restricted stocks' lack of immediate marketability. The discounts observed in the prices of restricted stocks reflect the fact that a holder of such securities may sustain losses or forgo profits because of the inability to sell them at a time of his own choosing. The holder is forced to hold the stocks while the prices of the unrestricted stocks fluctuate as a result of changes in the issuing companies' operations, in their financial conditions as the use of debt financing goes up or down, in the demand for the individual companies' stocks or in general stock market conditions.

The results of several published studies that employ the restricted stock model suggest a median discount of about 20% to 25% prior to the reduction in the required holding period in 1997 to one year under Rule 144[11] [12] [13] and 10% to 15% following the reduction in the required holding period.[12] We are not aware of any restricted stock studies pertaining to the period following the reduction in the required holding period in 2008 to six months.

Note that the holders of the restricted stocks included in these studies generally had a finite holding period which was defined by Rule 144. Given that there is no restriction on transfer and the Purchase Program Participants are required to file registration statements, it is reasonable to assume that a market for the TARP Preferred Stocks could develop over a similar one to two year period.

[11] Z. Christopher Mercer. 1997. "Analysis of Restricted Stocks of Public Companies," *Quantifying Marketability Discounts*. p. 345-70.
[12] Johnson. "Restricted Stock Discounts 1991-95." March 1999. *Shannon Pratt's Business Valuation Update*. p. 2.
[13] Kathryn F. Aschwald. May 2000. "Restricted Stock Discounts Decline as Result of 1-Year Holding Period," *Shannon Pratt's Business Valuation Update*.

The presence of a dividend and the seniority of a preferred stock over a common stock would make the marketability discount lower for the TARP Preferred Stocks, since the payment of the dividend provides liquidity to the investor and the seniority reduces price volatility, all other factors being equal.

Comparable Transactions Analysis

As we discussed earlier in this section, there have been three recent preferred stock transactions of similar scale to the TARP Preferred Stock investments, namely Berkshire Hathaway's investment in Goldman, Qatar's and Abu Dhabi's investment in Barclays, and MUFG's investment in Morgan Stanley.

Given the scarcity of similar transactions and the lack of consistency in the terms that impact the marketability of the securities in the three transactions analyzed (i.e., transfer restrictions, registration rights, hedging restrictions, etc.), the use of comparable transactions provides limited guidance in our selection of the discount for reduced marketability for the TARP Preferred Stocks and TARP Warrants.

Summary of Estimates for the Discount for Reduced Marketability

We make the following conclusions regarding the appropriate discount for reduced marketability for the TARP Preferred Stocks:

1. We believe the lower bound of a reduced marketability discount for the TARP Preferred Stocks is indicated by the previously described debt studies - approximately 3% to 5%.

2. We believe the restricted stock studies provide an upper bound for the appropriate discount for reduced marketability for the TARP Preferred Stocks.

3. Based on the debt and common stock studies, we believe a discount for reduced marketability for the TARP Preferred Stocks would be in the range of 5% to 10%, as summarized in the table on the following page. We believe the discount would be at the lower end of the range for the higher credit quality Purchase Program Participants and at the higher end of the range for the lower credit quality Purchase Program Participants.

The TARP Warrants represent significantly smaller blocks of securities and significantly less value than the TARP Preferred Stocks. Therefore, we believe the Treasury could more quickly gain liquidity for its interest in the TARP Warrants than for its interest in the TARP Preferred Stocks. The Treasury could gain liquidity by completing a public offering of the TARP Warrants or selling the TARP Warrants in a series of small transactions. Either case involves a short holding period with moderate transaction costs. If the Treasury completed a public offering, we would expect the costs of the offering to be approximately 3.0% to 5.0% of the value of the TARP Warrants. This is similar to the costs incurred for follow-on offerings of common stock (see Appendix Volume I-K). In this scenario, the holding period may be slightly shorter than if the Treasury were to slowly sell the securities over time because they could dispose of the entire block all at once. If the Treasury were to sell the TARP Warrants in a series of smaller transactions, we would expect slightly lower costs than in an offering but a

slightly longer holding period. We would expect these differences to be negligible, resulting in similar costs under both methods.

On the other hand, the TARP Warrants would exhibit greater price volatility than the TARP Preferred Stocks due to the relative position of the TARP Warrants in the capital structures of the issuers and the leverage associated with the option positions. This fact tends to increase the discount for reduced marketability for the TARP Warrants versus the TARP preferred stock. In addition, the TARP Warrants do not offer any current liquidity while the holders of the TARP Preferred Stocks are expected to receive quarterly cash dividends.

In all cases except for AIG and the Citigroup TIP investment, the TARP Warrants contain a provision that one-half of the TARP Warrants can be cancelled within one year upon a qualified equity offering. This provision has the effect of extending the holding period for one-half of the TARP Warrants – Treasury cannot sell 50% of its position in these TARP Warrants due to the fact that they could be cancelled. This additional holding period would tend to increase the discount for reduced marketability on one-half of the TARP Warrants.

When comparing the appropriate discount for reduced marketability for the TARP Preferred Stock versus the TARP Warrants that are not subject to cancellation, we believe that the lower costs and the reduced holding period for the TARP Warrants offset their greater price volatility and lack of current income. Based on the foregoing, we believe the value of the TARP Warrants not subject to cancellation should be discounted for marketability at similar rates as the TARP Preferred Stocks, and that the value of the TARP Warrants that are subject to cancellation should be discounted at rates similar to those observed in the restricted stock studies in which the restriction period was one year.
The table below shows our conclusions for the appropriate discounts for reduced marketability for the TARP Preferred Stock and the TARP Warrants.

TARP Investment Discounts due to Reduced Marketability

Purchase Program Participant	Preferred Stock	50% of Warrants not Subject to Cancellation	50% of Warrants Subject to Cancellation
American International Group, Inc.	10%	10%	NA
Bank of America Corporation	5%	5%	15%
Citigroup Inc. (CPP)	10%	10%	20%
Citigroup Inc. (TIP)	10%	10%	NA
The Goldman Sachs Group, Inc.	5%	5%	15%
JPMorgan Chase & Co.	5%	5%	15%
Morgan Stanley	10%	10%	20%
The PNC Financial Services Group	5%	5%	15%
U.S. Bancorp	5%	5%	15%
Wells Fargo & Company	5%	5%	15%

V. Valuation Analysis Summary

American International Group, Inc.

In Appendix Volume I-A, a company overview of AIG is presented to provide context for the valuation analysis of the Treasury's investment in AIG's preferred stock and warrant securities. As discussed in the Valuation Methodologies section, our fundamental approach to valuing these securities is to use data obtained from the public debt, equity and derivatives markets to estimate certain parameters, such as discount rates, volatility and default assumptions. As such, we have assumed that market prices for these publicly traded securities incorporate all public information regarding AIG as of the applicable valuation date.

The $40 billion TARP investment in AIG was made in conjunction with actions taken by the Federal Reserve Board to restructure the credit facility provided to AIG on September 16, 2008 and to provide additional lending facilities to AIG.

Since our valuation analysis is based on market prices and yields for AIG's debt and equity securities after giving effect to the loans, our valuation range implicitly considers the impact of such additional lending facilities to AIG.

Valuation of TARP AIG Preferred Stock

As discussed more specifically in the Valuation Methodologies section, we utilized two methodologies to estimate the Fair Market Value of the TARP AIG Preferred Stock as of November 10, 2008. We also utilized a CDS-Based DCF Approach to assess the reasonableness of our valuation conclusions from the other two methodologies.

1. Yield-Based DCF Approach

- The TARP AIG Preferred Stock's stated dividend is 10% per annum with no step up after five years.
- We calculated the OAYs and OASs for AIG's publicly traded preferred securities – 6.45% variable callable preferred and 7.7% variable callable preferred – as of October 14, 2008. The OAYs and OASs were determined by reducing the observed yields on AIG's publicly traded preferred securities by the value of the embedded call options associated with these securities.
- From these securities' OASs, we selected a range of OASs for the TARP AIG Preferred Stock and then adjusted the range of OASs to account for cumulative dividends for the TARP AIG Preferred Stock.
- Based on our selection of a range of OASs we deemed appropriate for the TARP AIG Preferred Stock, we calculated a range of OAYs of 24.21% to 25.46% to discount the contractual cash flows of the TARP AIG Preferred Stock to derive a value range of $15.7 billion to $16.5 billion.
- From this value we subtracted the value of the embedded call option associated with the TARP AIG Preferred Stock of $4 million to $8 million to derive a valuation range of $15.7 billion to $16.5 billion for the TARP AIG Preferred Stock (the value of the embedded call option for the TARP AIG Preferred Stock is di minimis relative to the size of the investment).

2. CCA Approach

- Summary Assumptions:

Asset Volatility:	Linearly declining from 13% to 12%; 12% to 11%
Dividend Rate:	10% per annum with no step up after year five
Default:	Market value of assets < 90% of face value of debt
Recovery:	0% of face value
Term:	10 years

- Our CCA Approach results in a valuation range for the TARP AIG Preferred Stock of $16.0 billion to $17.0 billion. The range of value results from our range of linearly declining asset volatilities: 13% to 12% and 12% to 11%.

3. CDS-Based DCF Approach

- Adjusting AIG's CDS rates by adding a spread of 300 basis points to 400 basis points results in a valuation range for the TARP AIG Preferred Stock of $17.0 billion to $18.3 billion.

- These values are consistent with our valuation range of $15.7 billion to $17.0 billion based on the other two methodologies, and the additional spread is reasonable in our judgment due to higher risk exposure relative to the other companies analyzed.

Conclusion

- To both the Yield-Based DCF Approach and CCA Approach, we applied a discount due to reduced marketability of 10% based on the large size of the investment and, to a lesser extent, the lack of a public market for the TARP AIG Preferred Stock.

- Our concluded range of value for the TARP AIG Preferred Stock, after application of a discount due to reduced marketability, is $14.1 billion to $15.3 billion.

- This concluded range of value, summarized in the table below, is the result of the low and high values derived from the Yield-Based DCF Approach and the CCA Approach, after application of a discount due to reduced marketability.

TARP AIG Preferred Stock Valuation Summary

	Yield Analysis OAY Range			CCA Analysis Decreasing Asset Volatility			Total Preferred Value After Discount		
	25.46%		24.21%	13% - 12%		12% - 11%			
$ Before Discount	$15.7	to	$16.5	$16.0	to	$17.0			
Discount %	10%		10%	10%		10%	**$14.1**	**to**	**$15.3**
$ After Discount	$14.1	to	$14.9	$14.4	to	$15.3			

Note: $ in billions.

Valuation of TARP AIG Warrants

As discussed in the Valuation Methodologies section, we utilized an options pricing approach implemented with a Monte Carlo simulation to determine the Fair Market Value of the TARP AIG Warrants as of November 10, 2008. Thus, our options pricing model has the following embedded features:

1. American-style option
2. Time varying volatility
3. Time varying risk-free rate
4. Dilution adjustment

The number of TARP AIG Warrants issued is the number of shares of common stock of AIG equal to 2% of the issued and outstanding shares of AIG as of the purchase date. Unlike the CPP investments, there is no provision to reduce the number of shares of common stock underlying the TARP AIG Warrants by half if AIG completes a Qualifying Equity Offering on or prior to December 31, 2009.

- Summary of Assumptions:

Number of Warrants:	53,798,766
Stock Price:	$2.28
Exercise Price:	$2.50
Dividend Yield:	0.0%

- We applied a discount due to reduced marketability of 10% to the TARP AIG Warrants.

- Given the small number of warrants associated with the TARP investment in AIG, the value of the warrants of $90 million is di minimis relative to the $40 billion face value of the TARP investment in AIG, as summarized in the table below:

TARP AIG Warrant Valuation Summary

	100% of Warrants
$ Before Discount	$0.100
Discount %	10%
$ After Discount	$0.090

Note: $s in billions.

Concluded Value of TARP Investment in AIG

The table below summarizes our valuation range for the TARP investment in AIG of $14.2 billion to $15.4 billion as of November 10, 2008, which represents approximately 36% to 38% of the $40 billion face amount of the investment.

TARP AIG Valuation Summary

Valuation Date	Face Value	Est. Preferred Values	Est. Warrant Values	Est. Total Values	% of Face Value
10-Nov-08	$40.0	$14.1 to $15.3	$0.090	$14.2 to $15.4	36% to 38%

Notes: $ in billions. After discounts due to reduced marketability.

VI. Valuation Analysis Summary

Bank of America Corporation

In Appendix Volume I-B, a company overview of BofA is presented to provide context for the valuation analysis of the Treasury's investment in BofA's preferred stock and warrant securities. As discussed in the Valuation Methodologies section, our fundamental approach to valuing these securities is to use data obtained from the public debt, equity and derivatives markets to estimate certain parameters, such as discount rates, volatility and default assumptions. As such, we have assumed that market prices for these publicly traded securities incorporate all public information regarding BofA as of the applicable valuation date.

Valuation of TARP BofA Preferred Stock

As discussed more specifically in the Valuation Methodologies section, we utilized two methodologies to estimate the Fair Market Value of the TARP BofA Preferred Stock as of October 14, 2008. We also utilized a CDS-Based DCF Approach to assess the reasonableness of our valuation conclusions from the other two methodologies.

1. Yield-Based DCF Approach

- The TARP BofA Preferred Stock's stated dividend is 5% per annum with a step up dividend rate to 9% in year five.

- We calculated the OAYs and OASs for BofA's publicly traded preferred securities – 6.625% Series I callable preferred, 7.25% Series J callable preferred, 6.204% Series D callable preferred and 8.2% Series H callable preferred – as of October 14, 2008. The OAYs and OASs were determined by reducing the observed yields on BofA's publicly traded preferred securities by the value of the embedded call options associated with these securities.

- In addition, we also considered: (i) a comparison of BofA's credit statistics to a set of comparable companies; (ii) the yields and spreads on BofA's publicly traded senior unsecured debt securities and senior subordinated debt securities; and (iii) the OAYs and OASs for a set of comparable publicly traded preferred securities to select a range of OASs for the TARP BofA Preferred Stock. We then adjusted our range of OASs to account for cumulative dividends for the TARP BofA Preferred Stock.

- Based on our selection of a range of OASs we deemed appropriate for the TARP BofA Preferred Stock, we calculated a range of OAYs of 7.52% to 8.27% to discount the contractual cash flows of the TARP BofA Preferred Stock to derive a value range of $13.9 billion to $15.5 billion.

- From this value we subtracted the value of the embedded call option associated with the TARP BofA Preferred Stock of $1.7 billion to $2.3 billion to derive a value range of $12.2 billion to $13.2 billion for the TARP BofA Preferred Stock.

2. CCA Approach

- Summary of Assumptions:

Asset Volatility:	Linearly declining from 7% to 6%; 6% to 5%
Dividend Rate:	5% per annum with a step up dividend rate to 9% after year five
Default:	Market value of assets < 90% of face value of debt
Recovery:	0% of face value
Term:	10 years

- Our CCA Approach results in a valuation range for the TARP BofA Preferred Stock of $11.8 billion to $13.5 billion. The range of value results from our range of linearly declining asset volatilities: 7% to 6% and 6% to 5%.

3. CDS-Based DCF Approach

- Adjusting BofA's CDS rates by adding a spread of 150 basis points to 250 basis points results in a valuation range for the TARP BofA Preferred Stock of $11.3 to billion $14.0 billion.

- These values are consistent with our valuation range of $11.8 billion to $13.5 billion based on the other two methodologies, and the additional spread is reasonable in our judgment relative to the other banks analyzed.

Conclusion

- To both the Yield-Based DCF Approach and CCA Approach, we applied a discount due to reduced marketability of 5% based on the large size of the investment and, to a lesser extent, the lack of a public market for the TARP BofA Preferred Stock.

- Our concluded range of value for the TARP BofA Preferred Stock, after application of a discount due to reduced marketability, is $11.2 billion to $12.8 billion.

- This concluded range of value, summarized in the table below, is the result of the low and high values derived from the Yield-Based DCF Approach and the CCA Approach, after application of a discount due to reduced marketability.

TARP BofA Preferred Stock Valuation Summary

	Yield Analysis OAY Range			CCA Analysis Decreasing Asset Volatility			Total Preferred Value After Discount		
	8.27%		7.52%	7% - 6%		6% - 5%			
$ Before Discount	$12.2	to	$13.2	$11.8	to	$13.5			
Discount %	5%		5%	5%		5%	**$11.2**	**to**	**$12.8**
$ After Discount	$11.6	to	$12.5	$11.2	to	$12.8			

Note: $ in billions.

Valuation of TARP BofA Warrants

As discussed in the Valuation Methodologies section, we utilized an options pricing approach implemented with a Monte Carlo simulation to determine the Fair Market Value of the TARP BofA Warrants as of October 14, 2008. Thus, our options pricing model has the following embedded features:

1. American-style option
2. Time varying volatility
3. Time varying risk-free rate
4. Dilution adjustment
5. Contingent cancellation of 50% of the TARP BofA Warrants

- Summary of Assumptions:

Number of Warrants:	73,075,674
Stock Price:	$26.53
Exercise Price:	$30.79
Dividend Yield:	3.0%

- To model the contingent cancellation feature, our options pricing model cancels 50% of the TARP BofA Warrants if by 12/31/09 the value of 50% of the TARP BofA Warrants exceeds the approximate cost to complete a "Qualifying Equity Offering." The cancellation triggers utilized for this purpose were 3% to 7% of the amount of a "Qualifying Equity Offering." These percentages are based on the estimated cost to complete a secondary offering of common stock (see Appendix Volume I-K).

- We applied a discount due to reduced marketability of 5% to the 50% of TARP BofA Warrants not subject to cancellation; we applied a discount due to reduced marketability of 15% to the 50% of TARP BofA Warrants subject to cancellation given the longer required holding period.

- The total value of the warrants is worth as much as 3.1% of the face value of the TARP's $15 billion investment in BofA.

- Our valuation of the TARP BofA Warrants, after application of a discount due to reduced marketability, is $378 million to $463 million, as summarized in the table below:

TARP BofA Warrant Valuation Summary

	50% of Warrants not Subject to Cancellation	50% of Warrants Subject to Cancellation			Total Warrant Value After Discounts		
		Cancellation Trigger					
		3.0%		7.0%			
$ Before Discount	$0.284	$0.127	to	$0.227			
Discount %	5%	15%		15%	**$0.378**	**to**	**$0.463**
$ After Discount	$0.270	$0.108	to	$0.193			

Note: $ in billions.

Concluded Value of TARP Investment in BofA

The table below summarizes our valuation range for the TARP investment in BofA of $11.6 billion to $13.3 billion as of October 14, 2008, which represents approximately 77% to 89% of the $15 billion face amount of the investment.

TARP BofA Valuation Summary

Valuation Date	Face Value	Est. Preferred Values	Est. Warrant Values	Est. Total Values	% of Face Value
14-Oct-08	$15.0	$11.2 to $12.8	$0.4 to $0.5	$11.6 to $13.3	77% to 89%

Notes: $ in billions. After discounts due to reduced marketability.

VII. Valuation Analysis Summary

Citigroup Inc.

In Appendix Volume I-C, a company overview of Citigroup is presented to provide context for the valuation analysis of the Treasury's investment in Citigroup's preferred stock and warrant securities. As discussed in the Valuation Methodologies section, our fundamental approach to valuing these securities is to use data obtained from the public debt, equity and derivatives markets to estimate certain parameters, such as discount rates, volatility and default assumptions. As such, we have assumed that market prices for these publicly traded securities incorporate all public information regarding Citigroup as of the applicable valuation date.

Preferred Stock – $25 Billion TARP CPP Investment (October 14, 2008)

As discussed more specifically in the Valuation Methodologies section, we utilized two methodologies to estimate the Fair Market Value of the TARP CPP Citigroup Preferred Stock as of October 14, 2008. We also utilized a CDS-Based DCF flow approach to assess the reasonableness of our valuation conclusions from the other two methodologies.

1. Yield-Based DCF Approach

- The TARP CPP Citigroup Preferred Stock's stated dividend is 5% per annum with a step up dividend rate to 9% in year five.
- We calculated the OAYs and OASs for Citigroup's publicly traded preferred securities – 8.125% Series AA callable preferred and 8.5% Series F callable preferred – as of October 14, 2008. The OAYs and OASs were determined by reducing the observed yields on Citigroup's publicly traded preferred securities by the value of the embedded call options associated with these securities.
- In addition, we also considered: (i) a comparison of Citigroup's credit statistics to a set of comparable companies; (ii) the yields and spreads on Citigroup's publicly traded senior unsecured debt securities and subordinated debt securities; and (iii) the OAYs and OASs for a set of comparable publicly traded preferred securities to select a range of OASs for the Citigroup TARP CPP Preferred Stock. We then adjusted our range of OASs to account for cumulative dividends for the TARP CPP Citigroup Preferred Stock.
- Based on our selection of a range of OASs we deemed appropriate for the TARP CPP Citigroup Preferred Stock, we calculated a range of OAYs of 10.77% to 11.77% to discount the contractual cash flows of the TARP CPP Citigroup Preferred Stock to derive a value range of $15.4 billion to $17.1 billion.
- From this value we subtracted the value of the embedded call option associated with the TARP CPP Citigroup Preferred Stock of $628 million to $980 million to derive a value range of $14.8 billion to $16.1 billion for the TARP CPP Citigroup Preferred Stock.

2. CCA Approach

- Summary of Assumptions:

Asset Volatility:	Linearly declining from 7% to 6%; 6% to 5%
Dividend Rate:	5% per annum with a step up dividend rate to 9% after year five
Default:	Market value of assets < 90% of face value of debt
Recovery:	0% of face value
Term:	10 years

- Our CCA Approach results in a valuation range for the TARP CPP Citigroup Preferred Stock of $15.2 billion to $17.3 billion. The range of value results from our range of linearly declining asset volatilities: 7% to 6% and 6% to 5%.

3. CDS-Based DCF Approach

- Adjusting Citigroup's CDS rates by adding a spread of 150 basis points to 250 basis points results in a valuation range for the TARP CPP Citigroup Preferred Stock of $14.9 billion to $18.1 billion.

- These values are consistent with our valuation range of $14.8 billion to $17.3 billion based on the other two methodologies and the additional spread is reasonable in our judgment relative to the other banks analyzed.

Conclusion

- To both the Yield-Based DCF Approach and CCA Approach, we applied a discount due to reduced marketability of 10% based on the large size of the investment and, to a lesser extent, the lack of a public market for the TARP CPP Citigroup Preferred Stock.

- Our concluded range of value for the TARP CPP Citigroup Preferred Stock, after application of a discount due to reduced marketability, is $13.3 billion to $15.6 billion.

- This concluded range of value, summarized in the table below, is the result of the low and high values derived from the Yield-Based DCF Approach and the CCA Approach, after application of a discount due to reduced marketability.

TARP CPP Citigroup Preferred Stock Valuation Summary

	Yield Analysis OAY Range			CCA Analysis Decreasing Asset Volatility			Total Preferred Value After Discount		
	11.77%		10.77%	7% - 6%		6% - 5%			
$ Before Discount	$14.8	to	$16.1	$15.2	to	$17.3			
Discount %	10%		10%	10%		10%	**$13.3**	**to**	**$15.6**
$ After Discount	$13.3	to	$14.5	$13.7	to	$15.6			

Note: $ in billions.

Valuation of TARP CPP Citigroup Warrants

As discussed in the Valuation Methodologies section, we utilized an options pricing approach implemented with a Monte Carlo simulation to determine the Fair Market Value of the TARP CPP Citigroup Warrants as of October 14, 2008. Thus, our options pricing model has the following embedded features:

1. American-style option
2. Time varying volatility
3. Time varying risk-free rate
4. Dilution adjustment
5. Contingent cancellation of 50% of the TARP CPP Citigroup Warrants

- Summary of Assumptions:

Number of Warrants:	210,084,034
Stock Price:	$18.62
Exercise Price:	$17.85
Dividend Yield:	0.0%

- To model the contingent cancellation feature, our options pricing model cancels 50% of the TARP CPP Citigroup Warrants if by 12/31/09 the value of 50% of the TARP CPP Citigroup Warrants exceeds the approximate cost to complete a "Qualifying Equity Offering." The cancellation triggers utilized for this purpose were 3% to 7% of the amount of a "Qualifying Equity Offering." These percentages are based on the estimated cost to complete a secondary offering of common stock (see Appendix Volume I-K).

- We applied a discount due to reduced marketability of 10% to the 50% of TARP CPP Citigroup Warrants not subject to cancellation; we applied a discount due to reduced marketability of 20% to the 50% of TARP CPP Citigroup Warrants subject to cancellation given the longer required holding period.

- The total value of the warrants is worth as much as 4.9% of the face value of the TARP's $25 billion investment in Citigroup.

- Our valuation of the TARP CPP Citigroup Warrants, after application of a discount due to reduced marketability, is $956 million to $1.2 billion, as summarized in the table on the next page:

TARP CPP Citigroup Warrant Valuation Summary

	50% of Warrants not Subject to Cancellation	50% of Warrants Subject to Cancellation (Cancellation Trigger 3.0%)		50% of Warrants Subject to Cancellation (Cancellation Trigger 7.0%)	Total Warrant Value After Discounts
$ Before Discount	$0.938	$0.140	to	$0.474	
Discount %	10%	20%		20%	**$0.956 to $1.223**
$ After Discount	$0.844	$0.112	to	$0.379	

Note: $ in billions.

Concluded Value of TARP CPP Investment in Citigroup

The table below summarizes our valuation range for the TARP CPP investment in Citigroup of $14.2 billion to $16.8 billion as of October 14, 2008, which represents approximately 57% to 67% of the $25 billion face amount of the investment.

TARP CPP Citigroup Valuation Summary

Valuation Date	Face Value	Est. Preferred Values	Est. Warrant Values	Est. Total Values	% of Face Value
14-Oct-08	$25.0	$13.3 to $15.6	$1.0 to $1.2	$14.2 to $16.8	57% to 67%

Notes: $ in billions. After discounts due to reduced marketability.

Preferred Stock – $20 Billion TARP TIP Investment (November 24, 2008)

In addition to the investment of $20 billion under the TARP TIP, the Treasury and the FDIC agreed to provide a guarantee of approximately $306 billion on loans, securities and commitments of Citigroup backed by residential and commercial real estate and other assets. Under the arrangement, the Treasury and the FDIC agreed to assume 90% of all losses on the portfolio after Citigroup assumed an amount equal to the first $29 billion of losses plus the amount of its reserves. According to the term sheet dated November 23, 2008, the U.S. Government's share of such losses will be allocated first to the Treasury via TARP up to $5 billion and then to the FDIC up to $10 billion. Citigroup agreed to issue $7 billion in additional preferred stock with an 8% dividend rate to the Treasury ($4 billion of the $7 billion total) and the FDIC ($3 billion of the $7 billion total) as a fee for such guarantee. Citigroup also issued warrants to the Treasury to purchase shares of Citigroup common stock for an aggregated exercise value of 10% of the preferred issued (65,975,495 warrants with an exercise price of $10.61).

Our analysis is limited to an assessment of the Fair Market Value of the $20 billion TARP TIP investment in Citigroup. We do not assess explicitly the value of the guarantee described above. However, since our valuation analysis is based on market prices and yields for Citigroup's debt and equity securities, our valuation range implicitly considers the impact of such guarantee.

As discussed more specifically in the Valuation Methodologies section, we utilized two methodologies to estimate the Fair Market Value of the TARP TIP Citigroup Preferred Stock as of November 24, 2008. We also utilized a CDS-Based DCF Approach to assess the reasonableness of our valuation conclusions from the other two methodologies.

1. Yield-Based DCF Approach

- The TARP TIP Citigroup Preferred Stock's stated dividend is 8% per annum with no step up after five years.

- Since the announcement of the TARP CPP Citigroup investment, the required rate of return on Citigroup's publicly traded preferred securities had increased substantially. We calculated the OAYs and OASs for Citigroup's publicly traded preferred securities – 8.125% Series AA callable preferred and 8.5% Series F callable preferred – as of November 24, 2008. The OAYs and OASs were determined by reducing the observed yields on Citigroup's publicly traded preferred securities by the value of the embedded call options associated with these securities.

- In addition, we also considered: (i) a comparison of Citigroup's credit statistics to a set of comparable companies; and (ii) the yields and spreads on Citigroup's publicly traded senior unsecured debt securities and subordinated debt securities. We then adjusted our range of OASs to account for cumulative dividends for the TARP TIP Citigroup Preferred Stock.

- Based on our selection of a range of OASs we deemed appropriate for the TARP TIP Citigroup Preferred Stock, we calculated a range of OAYs of 16.78% to

18.03% to discount the contractual cash flows of the TARP TIP Citigroup Preferred Stock to derive a value range of $8.9 billion to $9.5 billion.

- From this value we subtracted the value of the embedded call option associated with the TARP TIP Citigroup Preferred Stock of $16 million to $26 million to derive a value range of $8.9 billion to $9.5 billion for the TARP TIP Preferred Stock (the value of the embedded call option for the TARP TIP Citigroup Preferred Stock is di minimis relative to the size of the investment).

2. CCA Approach

- Summary of Assumptions:

Asset Volatility:	Linearly declining from 7% to 6%; 6% to 5%
Dividend Rate:	8% per annum with no step up after year five
Default:	Market value of assets < 90% of face value of debt
Recovery:	0% of face value
Term:	10 years

- Our CCA Approach results in a valuation range for the TARP TIP Citigroup Preferred Stock of $11.5 billion to $12.7 billion.

- The range of value results from our range of linearly declining asset volatilities: 7% to 6% and 6% to 5%.

3. CDS-Based Discounted Cash Flow Approach

- Adjusting Citigroup's CDS rates by adding a spread of 450 basis points to 550 basis points results in a valuation range for the TARP TIP Citigroup Preferred Stock of $8.7 billion to $10.5 billion.

- These values are consistent with our valuation range of $8.9 billion to $12.7 billion based on the other two methodologies and the additional spread is reasonable in our judgment due to higher risk exposure relative to the other banks analyzed.

Conclusion

- To both the Yield-Based DCF Approach and CCA Approach, we applied a discount due to reduced marketability of 10% based on the large size of the investment and, to a lesser extent, the lack of a public market for the TARP TIP Citigroup Preferred Stock.

- Our concluded valuation range for the TARP TIP Citigroup Preferred Stock, after application of a discount due to reduced marketability, is $8.0 billion to $11.4 billion.

- This concluded range of value, summarized in the table on the next page, is the result of the low and high values derived from the Yield-Based DCF Approach and the CCA Approach, after application of a discount due to reduced marketability.

TARP TIP Citigroup Preferred Stock Valuation Summary

	Yield Analysis OAY Range				CCA Analysis Decreasing Asset Volatility				Total Preferred Value After Discount		
	18.03%		16.78%		7% - 6%		6% - 5%				
$ Before Discount	$8.9	to	$9.5		$11.5	to	$12.7				
Discount %	10%		10%		10%		10%		**$8.0**	**to**	**$11.4**
$ After Discount	$8.0	to	$8.6		$10.4	to	$11.4				

Note: $ in billions.

Valuation of TARP TIP Citigroup Warrants

As discussed in the Valuation Methodologies section, we utilized an options pricing approach implemented with a Monte Carlo simulation to determine the Fair Market Value of the TARP TIP Citigroup Warrants as of November 24, 2008. Thus, our options pricing model has the following embedded features:

1. American-style option
2. Time varying volatility
3. Time varying risk-free rate
4. Dilution adjustment

The number of warrants issued is 10% of the face value of the TARP TIP Citigroup Preferred Stock investment divided by the exercise price for the TARP TIP Citigroup Warrants. Unlike the CPP investments, there is no provision to reduce the number of shares of common stock underlying the TARP TIP Citigroup Warrants by half if Citigroup completes a Qualifying Equity Offering on or prior to December 31, 2009.

- Summary of Assumptions:

Number of Warrants:	188,501,414
Stock Price:	$ 5.95
Exercise Price:	$10.61
Dividend Yield:	0.0%

- We applied a discount due to reduced marketability of 10% to the TARP TIP Citigroup Warrants.
- The total value of the warrants is worth approximately 1.6% of the face value of the TARP TIP's $20 billion investment in Citigroup.
- Our valuation of the TARP TIP Citigroup Warrants, after application of a discount due to reduced marketability, is $309 million, as summarized in the table below:

TARP TIP Citigroup Warrant Valuation Summary

	100% of Warrants
$ Before Discount	$0.343
Discount %	10%
$ After Discount	$0.309

Note: $ in billions.

Concluded Value – $20 Billion TARP TIP Investment

The table below summarizes our valuation range for the TARP TIP investment in Citigroup of $8.3 billion to $11.7 billion as of November 24, 2008, which represents approximately 41% to 59% of the $20 billion face amount of the investment.

TARP TIP Citigroup Valuation Summary

Valuation Date	Face Value	Est. Preferred Values	Est. Warrant Values	Est. Total Values	% of Face Value
24-Nov-08	$20.0	$8.0 to $11.4	$0.309	$8.3 to $11.7	41% to 59%

Notes: $ in billions. After discounts due to reduced marketability.

VIII. Valuation Analysis Summary

The Goldman Sachs Group, Inc.

In Appendix Volume I-D, a company overview of Goldman is presented to provide context for the valuation analysis of the Treasury's investment in Goldman's preferred stock and warrant securities. As discussed in the Valuation Methodologies section, our fundamental approach to valuing these securities is to use data obtained from the public debt, equity and derivatives markets to estimate certain parameters, such as discount rates, volatility and default assumptions. As such, we have assumed that market prices for these publicly traded securities incorporate all public information regarding Goldman as of the applicable valuation date.

Valuation of TARP Goldman Preferred Stock

As discussed more specifically in the Valuation Methodologies section, we utilized two methodologies to estimate the Fair Market Value of the TARP Goldman Preferred Stock as of October 14, 2008. We also utilized a CDS-Based DCF Approach to assess the reasonableness of our valuation conclusions from the other two methodologies.

1. Yield-Based DCF Approach

- The TARP Goldman Preferred Stock's stated dividend is 5% per annum with a step up dividend rate to 9% in year five.

- Although Goldman has publicly traded preferred stock - 6.2% Series B callable preferred – it trades in relatively low volumes. Therefore, we (i) compared Goldman's credit statistics to a set of comparable companies (ii) considered the yields and spreads on Goldman's publicly traded senior unsecured debt securities and subordinated debt securities (iii) considered the OAYs and OASs for a set of comparable publicly traded preferred securities and (iv) considered the terms of Berkshire Hathaway's preferred investment in Goldman to select a range of OASs for the TARP Goldman Preferred Stock. We then adjusted our range of OASs to account for cumulative dividends for the TARP Goldman Preferred Stock.

- Based on our selection of a range of OASs we deemed appropriate for the TARP Goldman Preferred Stock, we calculated a range of OAYs of 9.52% to 10.27% to discount the contractual cash flows of the TARP Goldman Preferred Stock to derive a value range of $7.2 billion to $7.9 billion.

- From this value we subtracted the value of the embedded call option associated with the TARP Goldman Preferred Stock of $478 million to $640 million to derive a value range of $6.7 billion to $7.2 billion for the TARP Goldman Preferred Stock.

2. CCA Approach

- Summary of Assumptions:

Asset Volatility:	Linearly declining from 7.5% to 6.5%; 6.5% to 5.5%
Dividend Rate:	5% per annum with a step up dividend rate to 9% after year five
Default:	Market value of assets < 90% of face value of debt
Recovery:	0% of face value

Term: 10 years

- Our CCA Approach results in a valuation range for the TARP Goldman Preferred Stock of $7.0 billion to $8.0 billion.

- The range of value results from our range of linearly declining asset volatilities: 7.5% to 6.5% and 6.5% to 5.5%.

3. CDS-Based DCF Approach

- Adjusting Goldman's CDS rates by adding a spread of 150 basis points to 250 basis points results in a valuation range for the TARP Goldman Preferred Stock of $6.7 billion to $8.2 billion.

- These values are consistent with our valuation range of $6.7 billion to $8.0 billion based on the other two methodologies and the additional spread is reasonable in our judgment relative to the other banks analyzed.

Conclusion

- To both the Yield-Based DCF Approach and CCA Approach, we applied a discount due to reduced marketability of 5% based on the large size of the investment and, to a lesser extent, the lack of a public market for the TARP Goldman Preferred Stock.

- Our concluded valuation range for the TARP Goldman Preferred Stock, after application of a discount due to reduced marketability, is $6.4 billion to $7.6 billion.

- This concluded range of value, summarized in the table below, is the result of the low and high values derived from the Yield-Based DCF Approach and the CCA Approach, after application of a discount due to reduced marketability.

TARP Goldman Preferred Stock Valuation Summary

	Yield-Based DCF Approach OAY Range			CCA Approach Decreasing Asset Volatility			Total Preferred Value After Discount
	10.27%		9.52%	7.5% - 6.5%		6.5% - 5.5%	
$ Before Discount	$6.7	to	$7.2	$7.0	to	$8.0	
Discount %	5%		5%	5%		5%	**$6.4 to $7.6**
$ After Discount	$6.4	to	$6.9	$6.7	to	$7.6	

Note: $ in billions.

Valuation of TARP Goldman Warrants

As discussed in the Valuation Methodologies section, we utilized an options pricing approach implemented with a Monte Carlo simulation to determine the Fair Market Value of the TARP Goldman Warrants as of October 14, 2008. Thus, our options pricing model has the following embedded features:

1. American-style option
2. Time varying volatility
3. Time varying risk-free rate
4. Dilution adjustment
5. Contingent cancellation of 50% of the TARP Goldman Warrants

- Summary of Assumptions:

Number of Warrants:	12,205,045
Stock Price:	$122.90
Exercise Price:	$122.90
Dividend Yield:	0.82%

- To model the contingent cancellation feature, our options pricing model cancels 50% of the TARP Goldman Warrants if by 12/31/09 the value of 50% of the TARP Goldman Warrants exceeds the approximate cost to complete a "Qualifying Equity Offering." The cancellation triggers utilized for this purpose were 3% to 7% of the amount of a "Qualifying Equity Offering." These percentages are based on the estimated cost to complete a secondary offering of common stock (see Appendix Volume I-K).

- We applied a discount due to reduced marketability of 5% to the 50% of TARP Goldman Warrants not subject to cancellation; we applied a discount due to reduced marketability of 15% to the 50% of TARP Goldman Warrants subject to cancellation given the longer required holding period.

- The total value of the warrants is worth as much as 5.6% of the face value of the TARP's $10 billion investment in Goldman.

- Our valuation of the TARP Goldman Warrants, after application of a discount due to reduced marketability, is $436 million to $558 million, as summarized in the table below:

TARP Goldman Warrant Valuation Summary

	50% of Warrants not Subject to Cancellation	50% of Warrants Subject to Cancellation — Cancellation Trigger 3.0%		7.0%	Total Warrant Value After Discounts
$ Before Discount	$0.389	$0.079	to	$0.223	
Discount %	5%	15%		15%	**$0.436 to $0.558**
$ After Discount	$0.369	$0.067	to	$0.189	

Note: $ in billions.

Concluded Value of TARP Investment in Goldman

The table below summarizes our valuation range for the TARP investment in Goldman of $6.8 billion to $8.2 billion as of October 14, 2008, which represents approximately 68% to 82% of the $10 billion face amount of the investment.

TARP Goldman Valuation Summary

Valuation Date	Face Value	Est. Preferred Values	Est. Warrant Values	Est. Total Values	% of Face Value
14-Oct-08	$10.0	$6.4 to $7.6	$0.4 to $0.6	$6.8 to $8.2	68% to 82%

Notes: $ in billions. After discounts due to reduced marketability.

IX. Valuation Analysis Summary

JPMorgan Chase & Co.

In Appendix Volume I-E, a company overview of JPMorgan is presented to provide context for the valuation analysis of the Treasury's investment in JPMorgan's preferred stock and warrant securities. As discussed in the Valuation Methodologies section, our fundamental approach to valuing these securities is to use data obtained from the public debt, equity and derivatives markets to estimate certain parameters, such as discount rates, volatility and default assumptions. As such, we have assumed that market prices for these publicly traded securities incorporate all public information regarding JPMorgan as of the applicable valuation date.

Valuation of TARP JPMorgan Preferred Stock

As discussed more specifically in the Valuation Methodologies section, we utilized two methodologies to estimate the Fair Market Value of the TARP JPMorgan Preferred Stock as of October 14, 2008. We also utilized a CDS-Based DCF Approach to assess the reasonableness of our valuation conclusions from the other two methodologies.

1. Yield-Based DCF Approach

- The TARP JPMorgan Preferred Stock's stated dividend is 5% per annum with a step up dividend rate to 9% in year five.
- Although JPMorgan has publicly traded preferred securities - 5.49% Series G callable preferred, 5.72% Series F callable preferred, 6.15% Series E callable preferred and 8.625% Series J callable preferred – the Series E, F and G securities trade in low volumes. Therefore, we relied on JPMorgan's Series J preferred stock.
- We calculated an OAY and an OAS for JPMorgan's Series J preferred stock as of October 14, 2008. The OAY and OAS were determined by reducing the observed yield on JPMorgan Series J preferred stock by the value of the embedded call options associated with the security.
- In addition, we also considered: (i) a comparison JPMorgan's credit statistics to a set of comparable companies; (ii) the yields and spreads on JPMorgan's publicly traded senior unsecured debt securities and subordinated debt securities; and (iii) the OAYs and OASs for a set of comparable publicly traded preferred securities to select a range of OASs for the TARP JPMorgan Preferred Stock. We then adjusted our range of OASs to account for cumulative dividends for the TARP JPMorgan Preferred Stock.
- Based on our selection of a range of OASs we deemed appropriate for the TARP JPMorgan Preferred Stock, we calculated OAYs of 7.27% to 8.02% to discount the contractual cash flows of the TARP JPMorgan Preferred Stock to derive a value range of $24.0 billion to $26.8 billion.
- From this value we subtracted the value of the embedded call option associated with the TARP JPMorgan Preferred Stock of $3.2 billion to $4.5 billion to derive a value range of $20.8 billion to $22.3 billion for the TARP JPMorgan Preferred Stock.

2. CCA Approach

- Summary of Assumptions:

Asset Volatility:	Linearly declining from 7% to 6%; 6% to 5%
Dividend Rate:	5% per annum with a step up dividend rate to 9% after year five
Default:	Market value of assets < 90% of face value of debt
Recovery:	0% of face value
Term:	10 years

- Our CCA Approach results in a valuation range for the TARP JPMorgan Preferred Stock of $19.2 billion to $21.9 billion. The range of value results from our range of linearly declining asset volatilities: 7% to 6% and 6% to 5%.

3. CDS-Based DCF Approach

- Adjusting JPMorgan's CDS rates by adding a spread of 150 basis points to 250 basis points results in a valuation range for the TARP JPMorgan Preferred Stock of $19.0 billion to $23.5 billion.

- These values are consistent with our valuation range of $19.2 billion to $22.3 billion based on the other two methodologies and the additional spread is reasonable in our judgment relative to the other banks analyzed.

Conclusion

- To both the Yield-Based DCF Approach and CCA Approach, we applied a discount due to reduced marketability of 5% based on the large size of the investment and, to a lesser extent, the lack of a public market for the TARP JPMorgan Preferred Stock.

- Our concluded valuation range for the TARP JPMorgan Preferred Stock, after application of a discount due to reduced marketability, is $18.2 billion to $21.2 billion.

- This concluded range of value, summarized in the table below, is the result of the low and high values derived from the Yield-Based DCF Approach and the CCA Approach, after application of a discount due to reduced marketability.

TARP JPMorgan Preferred Stock Valuation Summary

	Yield Analysis OAY Range			CCA Analysis Decreasing Asset Volatility			Total Preferred Value After Discount
	8.02%		7.27%	7% - 6%		6% - 5%	
$ Before Discount	$20.8	to	$22.3	$19.2	to	$21.9	
Discount %	5%		5%	5%		5%	**$18.2 to $21.2**
$ After Discount	$19.8	to	$21.2	$18.2	to	$20.8	

Note: $ in billions.

Valuation of TARP JPMorgan Warrants

As discussed in the Valuation Methodologies section, we utilized an options pricing approach implemented with a Monte Carlo simulation to determine the Fair Market Value of the TARP JPMorgan Warrants as of October 14, 2008. Thus, our options pricing model has the following embedded features:

1. American-style option
2. Time varying volatility
3. Time varying risk-free rate
4. Dilution adjustment
5. Contingent cancellation of 50% of the TARP JPMorgan Warrants

- Summary of Assumptions:

Number of Warrants:	88,401,697
Stock Price:	$40.71
Exercise Price:	$42.42
Dividend Yield:	3.61%

- To model the contingent cancellation feature, our options pricing model cancels 50% of the TARP JPMorgan Warrants if by 12/31/09 the value of 50% of the TARP JPMorgan Warrants exceeds the approximate cost to complete a "Qualifying Equity Offering." The cancellation triggers utilized for this purpose were 3% to 7% of the amount of a "Qualifying Equity Offering." These percentages are based on the estimated cost to complete a secondary offering of common stock (see Appendix Volume I-K).

- We applied a discount due to reduced marketability of 5% to the 50% of TARP JPMorgan Warrants not subject to cancellation; we applied a discount due to reduced marketability of 15% to the 50% of TARP JPMorgan Warrants subject to cancellation given the longer required holding period.

- The total value of the warrants is worth as much as 4.0% of the face value of the TARP's $25 billion investment in JPMorgan.

- Our valuation of the TARP JPMorgan Warrants, after application of a discount due to reduced marketability, is $804 million to $1.0 billion, as summarized in the table on the next page:

TARP JPMorgan Warrant Valuation Summary

	50% of Warrants not Subject to Cancellation	50% of Warrants Subject to Cancellation (Cancellation Trigger 3.0%)		(Cancellation Trigger 7.0%)	Total Warrant Value After Discounts
$ Before Discount	$0.634	$0.238	to	$0.495	
Discount %	5%	15%		15%	**$0.804 to $1.022**
$ After Discount	$0.602	$0.202	to	$0.420	

Note: $ in billions.

Concluded Value of TARP Investment in JPMorgan

The table below summarizes our valuation range for the TARP investment in JPMorgan of $19.0 billion to $22.2 billion as of October 14, 2008, which represents approximately 76% to 89% of the $25 billion face amount of the investment.

TARP JPMorgan Valuation Summary

Valuation Date	Face Value	Est. Preferred Values	Est. Warrant Values	Est. Total Values	% of Face Value
14-Oct-08	$25.0	$18.2 to $21.2	$0.8 to $1.0	$19.0 to $22.2	76% to 89%

Notes: $ in billions. After discounts due to reduced marketability.

X. Valuation Analysis Summary

Morgan Stanley

In Appendix Volume I-F, a company overview of Morgan Stanley is presented to provide context for the valuation analysis of the Treasury's investment in Morgan Stanley's preferred stock and warrant securities. As discussed in the Valuation Methodologies section, our fundamental approach to valuing these securities is to use data obtained from the public debt, equity and derivatives markets to estimate certain parameters, such as discount rates, volatility and default assumptions. As such, we have assumed that market prices for these publicly traded securities incorporate all public information regarding Morgan Stanley as of the applicable valuation date.

Valuation of TARP Morgan Stanley Preferred Stock

As discussed more specifically in the Valuation Methodologies section, we utilized two methodologies to estimate the Fair Market Value of the TARP Morgan Stanley Preferred Stock as of October 14, 2008. We also utilized a CDS-Based DCF Approach to assess the reasonableness of our valuation conclusions from the other two methodologies.

1. Yield-Based DCF Approach

- The TARP Morgan Stanley Preferred Stock's stated dividend is 5% per annum with a step up dividend rate to 9% in year five.

- Since Morgan Stanley does not have any publicly traded preferred securities, we (i) compared Morgan Stanley's credit statistics to a set of comparable companies (ii) considered the yields and spreads on Morgan Stanley's publicly traded senior unsecured debt securities and subordinated debt securities and (iii) considered the OAYs and OASs for a set of comparable publicly traded preferred securities to select a range of OASs for the TARP Morgan Stanley Preferred Stock. We then adjusted our range of OASs to account for cumulative dividends for the TARP Morgan Stanley Preferred Stock.

- Based on our selection of a range of OASs we deemed appropriate for the TARP Wells Fargo Preferred Stock, we calculated a range of OAYs of 13.27% to 14.27% to discount the contractual cash flows of the TARP Morgan Stanley Preferred Stock to derive a value range of $4.9 billion to $5.3 billion.

- From this value we subtracted the value of the embedded call option associated with the TARP Morgan Stanley Preferred Stock of $83 million to $133 million to derive a value range of $4.8 billion to $5.2 billion for the TARP Morgan Stanley Preferred Stock.

2. CCA Approach

- Summary of Assumptions:

Asset Volatility:	Linearly declining from 7.5% to 6.5%; 6.5% to 5.5%
Dividend Rate:	5% per annum with a step up dividend rate to 9% after year five
Default:	Market value of assets < 90% of face value of debt
Recovery:	0% of face value
Term:	10 years

- Our CCA Approach results in a valuation range for the TARP Morgan Stanley Preferred Stock of $6.1 billion to $7.1 billion. The range of value results from our range of linearly declining asset volatilities: 7.5% to 6.5% and 6.5% to 5.5%.

3. CDS-Based Discounted Cash Flow Approach

- Adjusting Morgan Stanley's CDS rates by adding a spread of 250 basis points to 350 basis points results in a valuation range for the TARP Morgan Stanley Preferred Stock of $4.9 billion to $5.7 billion.

- These values are consistent with our valuation range of $4.8 billion to $7.1 billion based on the other two methodologies and the additional spread is reasonable in our judgment relative to the other banks analyzed.

Conclusion

- To both the Yield-Based DCF Approach and CCA Approach, we applied a discount due to reduced marketability of 10% based on the large size of the investment and, to a lesser extent, the lack of a public market for the TARP Morgan Stanley Preferred Stock.

- Our concluded valuation range for the TARP Morgan Stanley Preferred Stock, after application of a discount due to reduced marketability, is $4.3 billion to $6.4 billion.

- This concluded range of value, summarized in the table below, is the result of the low and high values derived from the Yield-Based DCF Approach and the CCA Approach, after application of a discount due to reduced marketability.

TARP Morgan Stanley Preferred Stock Valuation Summary

	Yield Analysis OAY Range			CCA Analysis Decreasing Asset Volatility			Total Preferred Value After Discount
	14.27%		13.27%	7.5% - 6.5%		6.5% - 5.5%	
$ Before Discount	$4.8	to	$5.2	$6.1	to	$7.1	
Discount %	10%		10%	10%		10%	**$4.3 to $6.4**
$ After Discount	$4.3	to	$4.7	$5.5	to	$6.4	

Note: $ in billions.

Valuation of TARP Morgan Stanley Warrants

As discussed in the Valuation Methodologies section, we utilized an options pricing approach implemented with a Monte Carlo simulation to determine the Fair Market Value of the TARP Morgan Stanley Warrants as of October 14, 2008. Thus, our options pricing model has the following embedded features:

1. American-style option
2. Time varying volatility
3. Time varying risk-free rate
4. Dilution adjustment
5. Contingent cancellation of 50% of the TARP Morgan Stanley Warrants

- Summary of Assumptions:

Number of Warrants:	65,245,759
Stock Price:	$21.94
Exercise Price:	$22.99
Dividend Yield:	1.82%

- To model the contingent cancellation feature, our options pricing model cancels 50% of the TARP Morgan Stanley Warrants if by 12/31/09 the value of 50% of the TARP Morgan Stanley Warrants exceeds the approximate cost to complete a "Qualifying Equity Offering." The cancellation triggers utilized for this purpose were 3% to 7% of the amount of a "Qualifying Equity Offering." These percentages are based on the estimated cost to complete a secondary offering of common stock (see Appendix Volume I-K).

- We applied a discount due to reduced marketability of 10% to the 50% of TARP Morgan Stanley Warrants not subject to cancellation; we applied a discount due to reduced marketability of 20% to the 50% of TARP Morgan Stanley Warrants subject to cancellation given the longer required holding period.

- The total value of the warrants is worth as much as 4.5% of the face value of the TARP's $10 billion investment in Morgan Stanley.

- Our valuation of the TARP Morgan Stanley Warrants, after application of a discount due to reduced marketability, is $383 million to $446 million, as summarized in the table below:

TARP Morgan Stanley Warrant Valuation Summary

	50% of Warrants not Subject to Cancellation	50% of Warrants Subject to Cancellation (Cancellation Trigger 3.0% to 7.0%)	Total Warrant Value After Discounts
$ Before Discount	$0.377	$0.054 to $0.133	
Discount %	10%	20% to 20%	**$0.383 to $0.446**
$ After Discount	$0.339	$0.043 to $0.106	

Note: $ in billions.

Concluded Value of TARP Investment in Morgan Stanley

The table below summarizes our valuation range for the TARP investment in Morgan Stanley of $4.7 billion to $6.8 billion as of October 14, 2008, which represents approximately 47% to 68% of the $10 billion face amount of the investment.

TARP Morgan Stanley Valuation Summary

Valuation Date	Face Value	Est. Preferred Values	Est. Warrant Values	Est. Total Values	% of Face Value
14-Oct-08	$10.0	$4.3 to $6.4	$0.4 to $0.4	$4.7 to $6.8	47% to 68%

Notes: $ in billions. After discounts due to reduced marketability.

XI. Valuation Analysis Summary

The PNC Financial Services Group

In Appendix Volume I-G, a company overview of PNC is presented to provide context for the valuation analysis of the Treasury's investment in PNC's preferred stock and warrant securities. As discussed in the Valuation Methodologies section, our fundamental approach to valuing these securities is to use data obtained from the public debt, equity and derivatives markets to estimate certain parameters, such as discount rates, volatility and default assumptions. As such, we have assumed that market prices for these publicly traded securities incorporate all public information regarding PNC as of the applicable valuation date.

Valuation of TARP PNC Preferred Stock

As discussed more specifically in the Valuation Methodologies section, we utilized two methodologies to estimate the Fair Market Value of the TARP PNC Preferred Stock as of October 24, 2008. Since we did not find sufficient data on CDS rates for PNC we did not utilize a CDS-Based DCF Approach to assess the reasonableness of our valuation conclusions from the other two methodologies.

1. Yield-Based DCF Approach

- The TARP PNC Preferred Stock's stated dividend is 5% per annum with a step up dividend rate to 9% in year five.
- Since PNC does not have any publicly traded preferred securities, we (i) compared PNC's credit statistics to a set of comparable companies (ii) considered the yields and spreads on publicly traded senior unsecured debt securities and subordinated debt securities of comparable companies and (iii) considered the OAYs and OASs for a set of comparable publicly traded preferred securities to select a range of OASs for the TARP PNC Preferred Stock. We then adjusted our range of OASs to account for cumulative dividends for the TARP PNC Preferred Stock.
- Based on our selection of a range of OASs we deemed appropriate for the TARP PNC Preferred Stock, we calculated a range of OAYs of 8.86% to 9.61% to discount the contractual cash flows of the TARP PNC Preferred Stock to derive a value range of $5.9 billion to $6.5 billion.
- From this value we subtracted the value of the embedded call option associated with the TARP PNC Preferred Stock of $479 million to $662 million to derive a value range of $5.4 billion to $5.8 billion for the TARP PNC Preferred Stock.

2. CCA Approach

- Summary of Assumptions:

Asset Volatility:	Linearly declining from 7% to 6%; 6% to 5%
Dividend Rate:	5% per annum with a step up dividend rate to 9% after year five
Default:	Market value of assets < 90% of face value of debt
Recovery:	0% of face value
Term:	10 years

- Our CCA Approach results in a valuation range for the TARP PNC Preferred Stock of $5.3 billion to $5.9 billion.

- The range of value results from our range of linearly declining asset volatilities: 7% to 6% and 6% to 5%.

Conclusion

- To both the Yield-Based DCF Approach and CCA Approach, we applied a discount due to reduced marketability of 5% based on the large size of the investment, and, to a lesser extent, the lack of a public market for the TARP PNC Preferred Stock.

- Our concluded valuation range for the TARP PNC Preferred Stock, after application of a discount due to reduced marketability, is $5.0 billion to $5.6 billion.

- This concluded range of value, summarized in the table below, is the result of the low and high values derived from the Yield-Based DCF Approach and the CCA Approach, after application of a discount due to reduced marketability.

TARP PNC Preferred Stock Valuation Summary

	Yield Analysis OAY Range			CCA Analysis Decreasing Asset Volatility			Total Preferred Value After Discount		
	9.61%		8.86%	7% - 6%		6% - 5%			
$ Before Discount	$5.4	to	$5.8	$5.3	to	$5.9			
Discount %	5%		5%	5%		5%	**$5.0**	**to**	**$5.6**
$ After Discount	$5.2	to	$5.5	$5.0	to	$5.6			

Note: $ in billions.

Valuation of TARP PNC Warrants

As discussed in the Valuation Methodologies section, we utilized an options pricing approach implemented with a Monte Carlo simulation to determine the Fair Market Value of the TARP PNC Warrants as of October 24, 2008. Thus, our options pricing model has the following embedded features:

1. American-style option
2. Time varying volatility
3. Time varying risk-free rate
4. Dilution adjustment
5. Contingent cancellation of 50% of the TARP PNC Warrants

- Summary of Assumptions:

Number of Warrants:	16,885,192
Stock Price:	$63.04
Exercise Price:	$67.33
Dividend Yield:	3.61%

- To model the contingent cancellation feature, our options pricing model cancels 50% of the TARP Morgan Stanley Warrants if by 12/31/09 the value of 50% of the TARP Morgan Stanley Warrants exceeds the approximate cost to complete a "Qualifying Equity Offering." The cancellation triggers utilized for this purpose were 3% to 7% of the amount of a "Qualifying Equity Offering." These percentages are based on the estimated cost to complete a secondary offering of common stock (see Appendix Volume I-K).

- We applied a discount due to reduced marketability of 5% to the 50% of TARP PNC Warrants not subject to cancellation; we applied a discount due to reduced marketability of 15% to the 50% of TARP PNC Warrants subject to cancellation given the longer required holding period.

- The total value of the warrants is worth as much as 3.1% of the face value of the TARP's $7.5792 billion investment in PNC.

- Our valuation of the TARP PNC Warrants, after application of a discount due to reduced marketability, is $190 million to $235 million, as summarized in the table below:

TARP PNC Warrant Valuation Summary

	50% of Warrants not Subject to Cancellation	50% of Warrants Subject to Cancellation			Total Warrant Value After Discounts		
		Cancellation Trigger					
		3.0%		7.0%			
$ Before Discount	$0.142	$0.066	to	$0.119			
Discount %	5%	15%		15%	**$0.190**	**to**	**$0.235**
$ After Discount	$0.134	$0.056	to	$0.101			

Note: $ in billions.

Concluded Value of TARP Investment in PNC

The table below summarizes our valuation range for the TARP investment in PNC of $5.2 billion to $5.8 billion as of October 24, 2008, which represents approximately 69% to 77% of the $7.5792 billion face amount of the investment.

TARP PNC Valuation Summary

Valuation Date	Face Value	Est. Preferred Values	Est. Warrant Values	Est. Total Values	% of Face Value
24-Oct-08	$7.6	$5.0 to $5.6	$0.2 to $0.2	$5.2 to $5.8	69% to 77%

Notes: $ in billions. After discounts due to reduced marketability.

XII. Valuation Analysis Summary

U.S. Bancorp

U.S. Bancorp

In Appendix Volume I-H, a company overview of USB is presented to provide context for the valuation analysis of the Treasury's investment in USB's preferred stock and warrant securities. As discussed in the Valuation Methodologies section, our fundamental approach to valuing these securities is to use data obtained from the public debt, equity and derivatives markets to estimate certain parameters, such as discount rates, volatility and default assumptions. As such, we have assumed that market prices for these publicly traded securities incorporate all public information regarding USB as of the applicable valuation date.

Valuation of TARP USB Preferred Stock

As discussed more specifically in the Valuation Methodologies section, we utilized two methodologies to estimate the Fair Market Value of the TARP USB Preferred Stock as of November 3, 2008. We also utilized a CDS-Based DCF Approach to assess the reasonableness of our valuation conclusions from the other two methodologies.

1. Yield-Based DCF Approach

- The TARP USB Preferred Stock's stated dividend is 5% per annum with a step up dividend rate to 9% in year five.
- We calculated the OAYs and OASs for USB's publicly traded preferred security – 7.875% Series D callable preferred – as of November 3, 2008. The OAY and OAS were determined by reducing the observed yield on USB's publicly traded preferred stock by the value of the embedded call option associated with the security.
- In addition, we also considered (i) a comparison of USB's credit statistics to a set of comparable companies and (ii) the yields and spreads on USB's publicly traded subordinated debt securities. We then adjusted our range of OASs to account for cumulative dividends for the TARP USB Preferred Stock.
- Based on our selection of a range of OASs we deemed appropriate for the TARP USB Preferred Stock, we calculated a range of OAYs of 6.33% to 7.08% to discount the contractual cash flows of the TARP USB Preferred Stock to derive a value range of $7.3 billion to $8.3 billion.
- From this value we subtracted the value of the embedded call option associated with the TARP USB Preferred Stock of $1.2 billion to $1.7 billion to derive a value range of $6.1 billion to $6.6 billion for the TARP USB Preferred Stock.

2. CCA Approach

- Summary of Assumptions:

Asset Volatility:	Linearly declining from 7% to 6%; 6% to 5%
Dividend Rate:	5% per annum with a step up dividend rate to 9% after year five
Default:	Market value of assets < 90% of face value of debt
Recovery:	0% of face value

Term: 10 years

- Our CCA Approach results in a valuation range for the TARP USB Preferred Stock of $6.0 billion to $6.8 billion.

- The range of value results from our range of linearly declining asset volatilities: 7% to 6% and 6% to 5%.

3. CDS-Based DCF Approach

- Adjusting USB's CDS rates by adding a spread of 100 basis points to 200 basis points results in a valuation range for the TARP USB Preferred Stock of $5.3 to billion $6.6 billion.

- These values are consistent with our valuation range of $6.0 billion to $6.8 billion based on the other two methodologies and the additional spread is reasonable in our judgment relative to the other banks analyzed.

Conclusion

- To both the Yield-Based DCF Approach and CCA Approach, we applied a discount due to reduced marketability of 5% based on the large size of the investment and, to a lesser extent, the lack of a public market for the TARP USB Preferred Stock.

- Our concluded valuation range for the TARP USB Preferred Stock, after application of a discount due to reduced marketability, is $5.7 billion to $6.5 billion.

- This concluded range of value, summarized in the table below, is the result of the low and high values derived from the Yield-Based DCF Approach and the CCA Approach, after application of a discount due to reduced marketability.

TARP USB Preferred Stock Valuation Summary

	Yield Analysis OAY Range			CCA Analysis Decreasing Asset Volatility			Total Preferred Value After Discount		
	7.08%		6.33%	7% - 6%		6% - 5%			
$ Before Discount	$6.1	to	$6.6	$6.0	to	$6.8			
Discount %	5%		5%	5%		5%	**$5.7**	**to**	**$6.5**
$ After Discount	$5.8	to	$6.3	$5.7	to	$6.5			

Note: $ in billions.

Valuation of TARP USB Warrants

As discussed in the Valuation Methodologies section, we utilized an options pricing approach implemented with a Monte Carlo simulation to determine the Fair Market Value of the TARP USB Warrants as of November 3, 2008. Thus, our options pricing model has the following embedded features:

1. American-style option
2. Time varying volatility
3. Time varying risk-free rate
4. Dilution adjustment
5. Contingent cancellation of 50% of the TARP USB Warrants

- Summary of Assumptions:

Number of Warrants:	32,679,102
Stock Price:	$30.30
Exercise Price:	$30.29
Dividend Yield:	4.11%

- To model the contingent cancellation feature, our options pricing model cancels 50% of the TARP USB Warrants if by 12/31/09 the value of 50% of the TARP USB Warrants exceeds the approximate cost to complete a "Qualifying Equity Offering." The cancellation triggers utilized for this purpose were 3% to 7% of the amount of a "Qualifying Equity Offering." These percentages are based on the estimated cost to complete a secondary offering of common stock (see Appendix Volume I-K).

- We applied a discount due to reduced marketability of 5% to the 50% of TARP USB Warrants not subject to cancellation; we applied a discount due to reduced marketability of 15% to the 50% of TARP USB Warrants subject to cancellation given the longer required holding period.

- The total value of the warrants is worth as much as 3.8% of the face value of the TARP's $6.6 billion investment in USB.

- Our valuation of the TARP USB Warrants, after application of a discount due to reduced marketability, is $201 million to $253 million, as summarized in the table below:

TARP USB Warrant Valuation Summary

	50% of Warrants not Subject to Cancellation	50% of Warrants Subject to Cancellation (Cancellation Trigger 3.0% to 7.0%)			Total Warrant Value After Discounts
$ Before Discount	$0.154	$0.064	to	$0.126	
Discount %	5%	15%		15%	**$0.201 to $0.253**
$ After Discount	$0.146	$0.054	to	$0.107	

Note: $ in billions.

Concluded Value of TARP Investment in USB

The table below summarizes our valuation range for the TARP investment in USB of $5.9 billion to $6.7 billion as of November 3, 2008, which represents approximately 89% to 102% of the $6.6 billion face amount of the investment.

TARP USB Valuation Summary

Valuation Date	Face Value	Est. Preferred Values	Est. Warrant Values	Est. Total Values	% of Face Value
3-Nov-08	$6.6	$5.7 to $6.5	$0.2 to $0.3	$5.9 to $6.7	89% to 102%

Notes: $ in billions. After discounts due to reduced marketability.

XIII. Valuation Analysis Summary

Wells Fargo & Company

In Appendix Volume I-I, a company overview of Wells Fargo is presented to provide context for the valuation analysis of the Treasury's investment in Wells Fargo's preferred stock and warrant securities. As discussed in the Valuation Methodologies section, our fundamental approach to valuing these securities is to use data obtained from the public debt, equity and derivatives markets to estimate certain parameters, such as discount rates, volatility and default assumptions. As such, we have assumed that market prices for these publicly traded securities incorporate all public information regarding Wells Fargo as of the applicable valuation date.

Valuation of TARP Wells Fargo Preferred Stock

As discussed more specifically in the Valuation Methodologies section, we utilized two methodologies to estimate the Fair Market Value of the TARP Wells Fargo Preferred Stock as of October 14, 2008. We also utilized a CDS-Based DCF Approach to assess the reasonableness of our valuation conclusions from the other two methodologies.

1. Yield-Based DCF Approach

- The TARP Wells Fargo Preferred Stock's stated dividend is 5% per annum with a step up dividend rate to 9% in year five.
- Since Wells Fargo does not have any publicly traded preferred securities, we (i) compared Wells Fargo's credit statistics to a set of comparable companies (ii) considered the yields and spreads on Wells Fargo's publicly traded senior unsecured debt securities and subordinated debt securities and (iii) considered the OAYs and OASs for a set of comparable publicly traded preferred securities to select a range of OASs for the TARP Wells Fargo Preferred Stock. We then adjusted our range of OASs to account for cumulative dividends for the TARP Wells Fargo Preferred Stock.
- Based on our selection of a range of OASs we deemed appropriate for the TARP Wells Fargo Preferred Stock, we calculated a range of OAYs of 6.77% to 7.52% to discount the contractual cash flows of the TARP Wells Fargo Preferred Stock to derive a value range of $25.8 billion to $29.0 billion.
- From this value we subtracted the value of the embedded call option associated with the TARP Wells Fargo Preferred Stock of $3.8 billion to $5.2 billion to derive a value range of $22.0 billion to $23.8 billion for the TARP Wells Fargo Preferred Stock.

2. CCA Approach

- Summary of Assumptions:

Asset Volatility:	Linearly declining from 7% to 6%; 6% to 5%
Dividend Rate:	5% per annum with a step up dividend rate to 9% after year five
Default:	Market value of assets < 90% of face value of debt
Recovery:	0% of face value
Term:	10 years

- Our CCA Approach results in a valuation range for the TARP Wells Fargo Preferred Stock of $22.1 billion to $24.9 billion.

- The range of value results from our range of linearly declining asset volatilities: 7% to 6% and 6% to 5%.

3. CDS-Based DCF Approach

- Adjusting Wells Fargo's CDS rates by adding a spread of 100 basis points to 200 basis points results in a valuation range for the TARP Wells Fargo Preferred Stock of $19.3 billion to $25.1 billion.

- These values are consistent with our valuation range of $22.0 billion to $24.9 billion based on the other two methodologies and the additional spread is reasonable in our judgment relative to the other banks analyzed.

Conclusion

- To both the Yield-Based DCF Approach and CCA Approach, we applied a discount due to reduced marketability of 5% based on the large size of the investment and, to a lesser extent, the lack of a public market for the TARP Wells Fargo Preferred Stock.

- Our concluded valuation range for the TARP Wells Fargo Preferred Stock, after application of a discount due to reduced marketability, is $20.9 billion to $23.7 billion.

- This concluded range of value, summarized in the table below, is the result of the low and high values derived from the Yield-Based DCF Approach and the CCA Approach, after application of a discount due to reduced marketability.

TARP Wells Fargo Preferred Stock Valuation Summary

	Yield Analysis OAY Range			CCA Analysis Decreasing Asset Volatility			Total Preferred Value After Discount
	7.52%		6.77%	7% - 6%		6% - 5%	
$ Before Discount	$22.0	to	$23.8	$22.1	to	$24.9	
Discount %	5%		5%	5%		5%	**$20.9 to $23.7**
$ After Discount	$20.9	to	$22.6	$21.0	to	$23.7	

Note: $ in billions.

Valuation of TARP Wells Fargo Warrants

As discussed in the Valuation Methodologies section, we utilized an options pricing approach implemented with a Monte Carlo simulation to determine the Fair Market Value of the TARP Wells Fargo Warrants as of October 14, 2008. Thus, our options pricing model has the following embedded features:

1. American-style option
2. Time varying volatility
3. Time varying risk-free rate
4. Dilution adjustment
5. Contingent cancellation of 50% of the TARP Wells Fargo Warrants

- Summary of Assumptions:

Number of Warrants:	110,261,688
Stock Price:	$33.52
Exercise Price:	$34.01
Dividend Yield:	2.06%

- To model the contingent cancellation feature, our options pricing model cancels 50% of the TARP Wells Fargo Warrants if by 12/31/09 the value of 50% of the TARP Wells Fargo Warrants exceeds the approximate cost to complete a "Qualifying Equity Offering." The cancellation triggers utilized for this purpose were 3% to 7% of the amount of a "Qualifying Equity Offering." These percentages are based on the estimated cost to complete a secondary offering of common stock (see Appendix Volume I-K).

- We applied a discount due to reduced marketability of 5% to the 50% of TARP Wells Fargo Warrants not subject to cancellation; we applied a discount due to reduced marketability of 15% to the 50% of TARP Wells Fargo Warrants subject to cancellation given the longer required holding period.

- The total value of the warrants is worth as much as 3.9% of the face value of the TARP's $25 billion investment in Wells Fargo.

- Our valuation of the TARP Wells Fargo Warrants, after application of a discount due to reduced marketability, is $771 million to $985 million, as summarized in the table on the following page:

TARP Wells Fargo Warrant Valuation Summary

	50% of Warrants not Subject to Cancellation	50% of Warrants Subject to Cancellation (Cancellation Trigger)		Total Warrant Value After Discounts
		3.0%	7.0%	
$ Before Discount	$0.634	$0.200 to	$0.451	
Discount %	5%	15%	15%	**$0.771 to $0.985**
$ After Discount	$0.602	$0.170	$0.383	

Note: $ in billions.

Concluded Value of TARP Investment in Wells Fargo

The table below summarizes our valuation range for the TARP investment in Wells Fargo of $21.7 billion to $24.6 billion as of October 14, 2008, which represents approximately 87% to 99% of the $25 billion face amount of the investment.

TARP Wells Fargo Valuation Summary

Valuation Date	Face Value	Est. Preferred Values	Est. Warrant Values	Est. Total Values	% of Face Value
14-Oct-08	$25.0	$20.9 to $23.7	$0.8 to $1.0	$21.7 to $24.6	87% to 99%

Notes: $ in billions. After discounts due to reduced marketability.

XIV. Summary of Value Conclusions

Summary of Value Conclusions

Summary of Value Conclusions*

Purchase Program Participant TARP Program Valuation Date	Investment Amount	Estimated Preferred Values* Low	Estimated Preferred Values* High	Estimated Warrant Values* Low	Estimated Warrant Values* High	Total Estimated Value* Low	Total Estimated Value* High	Total Estimated Value* as a % of Face Value Low	Total Estimated Value* as a % of Face Value High
American International Group, Inc. SSFI - 11/10/08	$40.0	$14.1	$15.3	$0.090		$14.2	$15.4	36%	38%
Bank of America Corporation CPP - 10/14/08	$15.0	$11.2	$12.8	$0.378	$0.463	$11.6	$13.3	77%	89%
Citigroup Inc. CPP - 10/14/08	$25.0	$13.3	$15.6	$0.956	$1.223	$14.2	$16.8	57%	67%
Citigroup Inc. TIP - 11/24/08	$20.0	$8.0	$11.4	$0.309		$8.3	$11.7	41%	59%
The Goldman Sachs Group, Inc. CPP - 10/14/08	$10.0	$6.4	$7.6	$0.436	$0.558	$6.8	$8.2	68%	82%
JPMorgan Chase & Co. CPP - 10/14/08	$25.0	$18.2	$21.2	$0.804	$1.022	$19.0	$22.2	76%	89%
Morgan Stanley CPP - 10/14/08	$10.0	$4.3	$6.4	$0.383	$0.446	$4.7	$6.8	47%	68%
The PNC Financial Services Group CPP - 10/24/08	$7.6	$5.0	$5.6	$0.190	$0.235	$5.2	$5.8	69%	77%
U.S. Bancorp CPP - 11/3/08	$6.6	$5.7	$6.5	$0.201	$0.253	$5.9	$6.7	89%	102%
Wells Fargo & Company CPP - 10/14/08	$25.0	$20.9	$23.7	$0.771	$0.985	$21.7	$24.6	87%	99%
Total	$184.2					$111.7	$131.6	**61%**	**71%**

Notes: $ in billions. All values are after applicable discounts due to reduced marketability.

* as of the respective valuation dates.

Summary of Value Conclusions

This report is submitted to the Congressional Oversight Panel, which was created to oversee the expenditure of Troubled Asset Relief Program funds by Congress in the Emergency Economic Stabilization Act of 2008, on this 4th day of February, 2009.

Respectfully submitted,

Duff & Phelps, LLC

Duff & Phelps, LLC