BEFORE THE STATE OF NEW JERSEY
OFFICE OF ADMINISTRATIVE LAW
BOARD OF PUBLIC UTILITIES

I/M/O THE PETITION OF	**)**	
PIVOTAL UTILITY HOLDINGS, INC.	**)**	
D/B/A ELIZABETHTOWN GAS	**)**	
FOR APPROVAL OF INCREASED	**)**	**BPU DKT. NO. GR09030195**
BASE TARIFF RATES FOR GAS	**)**	**OAL DKT. NO. PUC-03655-2009N**
SERVICE AND OTHER TARIFF	**)**	
REVISIONS	**)**	

TESTIMONY OF MATTHEW I. KAHAL
ON BEHALF OF THE
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I. QUALIFICATIONS

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Matthew I. Kahal. I am employed as an independent consultant retained in this matter by the Division of the Rate Counsel (Rate Counsel). My business address is 5565 Sterrett Place, Suite 310, Columbia, Maryland 21044.

Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND.

A. I hold B.A. and M.A. degrees in economics from the University of Maryland and have completed course work and examination requirements for the Ph.D. degree in economics. My areas of academic concentration included industrial organization, economic development and econometrics.

Q. WHAT IS YOUR PROFESSIONAL BACKGROUND?

A. I have been employed in the area of energy, utility and telecommunications consulting for the past 25 years working on a wide range of topics. Most of my work has focused on electric utility integrated planning, plant licensing, environmental issues, mergers and financial issues. I was a co-founder of Exeter Associates, and from 1981 to 2001 I was employed at Exeter Associates as a Senior Economist and Principal. During that time, I took the lead role at Exeter in performing cost of capital and financial studies. In recent years, the focus of much of my professional work has shifted to electric utility restructuring and competition.

Prior to entering consulting, I served on the Economics Department faculties at the University of Maryland (College Park) and Montgomery College teaching courses on economic principles, development economics and business.

A complete description of my professional background is provided in Appendix A.

Q. HAVE YOU PREVIOUSLY TESTIFIED AS AN EXPERT WITNESS BEFORE UTILITY REGULATORY COMMISSIONS?

A. Yes. I have testified before approximately two-dozen state and federal utility commissions in more than 300 separate regulatory cases. My testimony has addressed a variety of subjects including fair rate of return, resource planning, financial assessments, load forecasting, competitive restructuring, rate design, purchased power contracts, merger economics and other regulatory policy issues. These cases have involved electric, gas, water and telephone utilities. In 1989,1 testified before the U. S. House of Representatives, Committee on Ways and Means, on proposed federal tax legislation affecting utilities. A list of these cases may be found in Appendix A, with my statement of qualifications.

Q. WHAT PROFESSIONAL ACTIVITIES HAVE YOU ENGAGED IN SINCE LEAVING EXETER AS A PRINCIPAL IN 2001?

A. Since 2001,1 have worked on a variety of consulting assignments pertaining to electric restructuring, purchase power contracts, environmental controls, cost of capital and other regulatory issues. Current and recent clients include the U.S. Department of Justice, U.S. Air Force, U.S. Department of Energy, the Federal Energy Regulatory Commission, Connecticut Attorney General, Pennsylvania Office of Consumer Advocate, New Jersey Division of Rate Counsel, Rhode Island Division of Public Utilities, Louisiana Public Service Commission, Arkansas Public Service Commission, Maryland Department of Natural Resources and Energy Administration, and MCI.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE NEW JERSEY BOARD OF PUBLIC UTILITIES?

A. Yes. I have testified on cost of capital and other matters before the Board of Public Utilities (Board or BPU) in gas, water and electric cases during the past 20 years. A listing of those cases is provided in my attached Statement of Qualifications. This includes the submission of testimony on rate of return issues in the recent gas service rate case of New Jersey Natural Gas Company (BPU Docket No. GR070110889).

II. OVERVIEW

A. Summary of Recommendation

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. I have been asked by the New Jersey Department of the Public Advocate, Division of Rate Counsel ("Rate Counsel") to develop a recommendation concerning the fair rate of return on the gas distribution utility rate base of Pivotal Utility Holdings, Inc., d/b/a Elizabethtown Gas ("ETG" or "the Company"). This includes both a review of the Company's proposal concerning rate of return and the preparation of an independent study of the cost of common equity. I am providing my recommendation to Rate Counsel and its consultants for use in calculating the test year annual revenue requirement in this case.

Q. WHAT IS THE COMPANY'S RATE OF RETURN PROPOSAL IN THIS CASE?

A. As presented on Exhibit MJM-6, 6 + 6 update, the Company requests an authorized overall rate of return of 8.41 percent. The proposed capital structure is pro forma and stated at December 31, 2009, the end of the post test year, and includes 49.70 percent common equity, 7.97 percent short-term debt and 42.33 percent long-term debt. This capital structure is based on a combination of a gas industry benchmark and the 2008 levels of short-term debt for its parent, AGL Resources ("AGLR"). The Company requests a return on the common equity component of 11.25 percent. The overall rate of return and cost of debt recommendations are sponsored by the Company's witness, Mr. Michael Morely, while the cost of equity recommendation is sponsored by Dr. Roger Morin. Mr. Morely incorporates Dr. Morin's cost of equity

recommendation, along with Dr. Morin's finding for a benchmark industry capital structure.

Q. WHAT IS THE COMPANY'S RELATIONSHIP WITH AGLR?

A. In 2004, the Board issued a decision permitting AGLR to acquire ETG (Docket No. GM04070721). AGLR is a holding company primarily engaged in the natural gas distribution utility business but also with some non-regulated business. Its largest subsidiary is Atlanta Gas Light Company, and ETG is its next largest utility subsidiary. This would be ETG's first base rate case since completion of the AGLR merger. In addition to utility operations, AGLR is also engaged in non-regulated natural gas marketing and related services.

Q. DOES THE COMPANY'S DECEMBER 31, 2009 CAPITAL STRUCTURE INCLUDE ESTIMATES OF ADDITIONAL FINANCINGS?

A. Yes. The December 31, 2009 capitalization includes a planned $250 million issue of long-term debt. However, for capital structure purposes, this new debt is subtracted from the balance of short-term debt. I discuss this adjustment in more detail later in my testimony.

Q. WHAT IS THE COMPANY'S RETURN ON EQUITY AUTHORIZED IN ITS LAST BASE RATE CASE?

A. My understanding is that the Company's currently authorized return on equity set in its last rate case is 10.0 percent. Hence, in this case Dr. Morin recommends a major increase over the Company's currently authorized return on equity approved in Docket No. GR02040245, December 9, 2002.

Q. WHAT IS YOUR RECOMMENDATION AT THIS TIME ON RATE OF RETURN?

A. As summarized on Schedule MIK-1, page 1 of 2, I am recommending an overall return on ETG's utility rate base of 7.52 percent. This includes a return on common equity of 10.1 percent and a capital structure of 53.9 percent total debt (inclusive of short-term debt) and 46.1 percent common equity. This recommendation is provisional and may change with updating. It includes the Company's original estimate of AGLR's December 31, 2009 common equity long-term debt and the adjusted level of short-term debt. Please note that my capital structure includes 7.97 percent short-term debt which is the same percentage as recommended by the Company in its 6 + 6 update.

Q. WHY DOES YOUR CAPITAL STRUCTURE DIFFER FROM THAT PROPOSED BY THE COMPANY?

A. The Company and I are using identical percentages of short-term debt (i.e., 7.97 percent). However, Company witness Mr. Morely proposes a "hypothetical" capital structure for the "permanent" portion of capitalization. Using data supplied by Dr. Morin, he obtains 54 percent common equity and 46 percent long-term debt. After layering in the 7.97 percent short-term debt, the common equity ratio becomes 49.7 percent of total capital.

I do not believe Mr. Morely's decision to use a hypothetical capital structure for the "permanent" capital is adequately supported, nor is it necessarily accurate. Instead, I have used the Company's own estimate of the overall AGLR capital structure provided with Mr. Morely's 6 + 6 supporting workpapers. The Company's estimated AGLR capitalization data support somewhat a lower common equity ratio of 46.1 percent instead of the "hypothetical" 49.7 percent. I believe my recommended capital structure is reasonable and consistent with Company financial targets.

Q. DO YOU AGREE WITH THE COST RATES FOR SHORT AND LONG-TERM DEBT PROPOSED BY MR. MORELY?

A. Not entirely. Mr. Morely proposes a short-term cost of debt of 2.74 percent which appears to reflect cost conditions in 2008. I have provisionally proposed a cost rate of 1.2 percent based on cost conditions prevailing in 2009 and going forward.

I accept Mr. Morely's calculation of the embedded cost of long-term debt with one change. The Company assumes a $250 million long-term debt issue for later this year at a cost rate of 8.0 percent. Based on current market conditions, I believe 8.0 percent is excessive. I have lowered that assumed cost rate from 8.0 to 7.0 percent, which has the effect of lowering the calculated embedded cost rate from Mr. Morely's 6.15 percent to 6.02 percent.

Q. WHAT IS THE BASIS OF YOUR 10.1 PERCENT RECOMMENDATION FOR THE RETURN ON EQUITY?

A. I am relying primarily upon the standard discounted cash flow ("DCF") model applied to a group of natural gas distribution utility companies. This is the same proxy group of gas companies as used by Dr. Morin. My DCF study uses market data from the first half of 2009, obtaining a range of 9.8 to 10.3 percent. My recommendation of 10.1 percent approximates the midpoint and reasonably reflects this range of evidence. I have attempted to confirm my DCF results and recommendation using the Capital Asset Pricing Model (CAPM) as a check. While the CAPM tends to produce a very wide range of cost of equity results, in my opinion, a reasonable application of this methodology using current market data provides estimates in approximately the 8 to 10 percent range when a wide range of data inputs is used, with a potential midpoint of about 9 percent (or even less). As my testimony explains, the CAPM currently produces cost of equity results that are

abnormally low (due to current financial market distress) and should not be given as much weight as it otherwise would under more normal circumstances.

Q. DO YOU INCLUDE AN ADJUSTMENT FOR FLOTATION EXPENSE?

A. No. Unlike Dr. Morin, I have not included an adjustment factor for flotation expenses. Available evidence does not demonstrate that ETG (or its parent AGLR) either recently have or are expected to incur such costs to fund ETG's capital expansion. Since there are no identifiable costs to recover, a return adder would be improper.

Q. DO YOU CONSIDER ETG TO BE A LOW-RISK UTILITY COMPANY?

A. Yes, very much so. ETG provides monopoly gas distribution utility service in its New Jersey service territory, subject to the regulatory oversight of this Board. There is no indication of any material increase in business or financial risk relative to other utilities in recent years. In Section III of my testimony I discuss the risk attributes for the Company cited in recent credit rating reports and elsewhere.

B. <u>Capital Cost Trends</u>

Q. HAVE YOU HAVE YOU REVIEWED THE TRENDS IN MARKET CAPITAL COSTS OVER THE PAST DECADE?

A. Yes. My Schedule MIK-2 shows certain capital cost indicators on an annual average basis since 1992 and on a monthly basis during January 2002 – June 2009. The indicators include inflation (as measured by the annual change in the Consumer Price Index or CPI), yields on short-term Treasury Bills, yields on ten-year Treasury notes and single A-rated utility long-term bond yields (published by Moody's).

This schedule shows that despite year-to-year fluctuations there has been a general downward trend in capital costs over most of this time period, at least for

long-term securities. Short-term interest rates tend to be governed by Federal Reserve Board ("Fed") monetary policy, and up until about a year and a half ago, the Fed had been tightening (i.e., raising short-term rates) in response to a strengthening economy. In response to a slowing U. S. economy and subsequent sharp recession, severe distress in the housing market and a variety of dislocations in financial markets, the Fed has reversed this trend and pursued an aggressive policy of monetary easing. In addition to lowering interest rates, it has taken a number of innovative actions to make liquidity and credit available to financial institutions to help ensure financial markets can function properly.[1]

As measured by utility bond yields, it appears that capital costs "bottomed out" in mid-2005, with single-A utility bond yields reaching a low point in the mid 5 percent range. Long-term interest rates remained relatively low through most of 2006 (i.e., long-term utility bond yields at approximately 6 percent), and this continued (with some fluctuations) until late 2008. During the financial/economic crisis conditions of the fourth quarter 2008, long-term corporate bond yields have moved up sharply to the 8 to 9 percent range. Since then, the financial crisis has eased, and yields on investment grade corporate bonds have moderated. As shown on page 4 of Schedule MIK-2, during the first half of 2009, single A utility bond yields declined, returning to the 6.2 to 6.5 percent range, which is roughly consistent with prevailing yields of the last several years.

On the other hand, ten-year Treasury yields have trended sharply downward, in recent months reaching as low as 2.5 percent at the beginning of 2009. The

[1] In a January 13, 2009 presentation at the London School of Economics, Fed Chairman Bernanke described the Fed's aggressive efforts to lower interest rates and its present policy of "credit easing" using a vast array of monetary tools. These policy initiatives include a dramatic expansion of the Fed's balance sheet to provide credit or credit support to various sectors of the U. S. economy. This speech is available on the Fed's web site, www.federalreserve.gov.

pronounced downward trend in Treasury yields relative to long-term utility bond yields undoubtedly reflects a "flight to quality" behavior by investors as a result of the current economic and financial market distress. In recent months long-term Treasury yields have moved up somewhat from these extreme historic low levels. This reflects some sign of economic recovery (or at least stabilization) and an easing of credit spreads.

Q. ACCORDING TO SCHEDULE MIK-2, THERE HAS BEEN A RECENT UPWARD MOVEMENT IN INFLATION DURING 2008. WHAT ACCOUNTED FOR THAT TREND?

A. The 2008 upward movement in inflation was in response to price spikes for energy and, to some degree, it reflected increased food prices. However, since last summer, this trend has reversed with commodity prices collapsing and overall inflation essentially disappearing. The CPI so far in 2009 shows essentially zero inflation or even negative inflation. Long-term forecasts for inflation are also modest, i.e., the "consensus" forecast for the GDP deflator is 2.1 percent per year for the next ten years (*Blue Chip Economic Indicators*, March 2009), and consensus inflation forecasts for the next year or two indicate inflation as negligible or less than two percent. There are a number of important forces at work that will tend to hold down long-term inflation and inflationary expectations. Low inflation is a crucially important force at work that tends to lower the utility cost of capital.

Q. YOUR SCHEDULE MIK-2 PROVIDES DATA ON LONG-TERM INTEREST RATES. IS THIS INDICATIVE OF COMMON EQUITY COST RATES?

A. At least in a general sense, I believe that it is. The forces over time that lead to lower yields on long-term debt are likely to also favorably affect the cost of equity, although

I would acknowledge that debt and equity cost rates do not necessarily move together in lock step. The favorable cost trends discussed above likely affect ETG's equity cost rate associated with providing gas distribution utility service. At the present time, however, the market trends are ambiguous since yields on Treasury bonds have fallen sharply while yields on utility bonds have increased somewhat.

There is another force at work favorably impacting the cost of equity – federal tax policy. In 2003, Congress enacted legislation granting very favorable income tax treatment for corporate dividend payments and capital gains. At least for taxable accounts, investors care very much about the tax treatment accorded to their returns. All else equal, lower taxes on returns to equity holders means that investors should be willing to accept lower return for holding common stocks (such as dividend-paying utility companies), particularly as compared to conventional utility bonds which do not enjoy such tax advantages.

Importantly, the DCF method, which uses relatively current market data, can capture the cost of equity implications of such tax advantages. Other methods, such as the historical risk premium (as used by Dr. Morin), cannot do so since these current tax treatments are not reflected in the long-term historical data series.

Q. DO YOU HAVE ANY FURTHER COMMENTS ON THE CURRENT ECONOMIC ENVIRONMENT?

A. Yes. The past nine months have been a very difficult economic environment that has been characterized by a pronounced economic downturn, rising unemployment and severe financial market distress. In addition, energy and commodity prices escalated sharply and then subsequently collapsed. These difficult conditions have implications for the cost of capital but in conflicting directions. The weakening of the U. S. (and global) economy and extremely low inflation tend to push down the cost of capital, as

evidenced by the sharp interest rate reductions in Treasury securities and even the recent moderation in utility bond yields. However, volatility and financial distress can increase the corporate cost of capital by increasing investment risk, at least until confidence in markets and financial stability is reestablished. In this environment, where credit markets are functioning poorly and investment behavior is highly distorted, cost of capital estimation must be approached with caution. Certain assumptions embedded in financial markets may not apply as well as they would under normal circumstances, and this dysfunction can distort cost of capital estimation results. As Dr. Morin notes, due to these highly unusual conditions, it has become difficult to apply traditional cost of capital models.

While there are conflicting signals in financial markets, there have been notable improvements in recent months. In the first half of 2009, financial market volatility is greatly attenuated and credit spreads over long-term Treasury yields sharply reduced for credit-worthy utilities (such as AGLR and ETG). The stock market has to some degree recovered from its March 2009 low levels. The Fed has committed itself to maintaining near zero levels of short-term interest rates until an economic recovery takes hold or inflationary pressures become evident. Inflation, however, is simply not on the horizon at the present time. Strong, credit-worthy companies – such as ETG and AGLR – operate in a low inflation and capital cost environment, and this is expected to continue for some time.

C. Remainder of Testimony

Q. PLEASE DESCRIBE THE ORGANIZATION OF THE REMAINDER OF YOUR DIRECT TESTIMONY.

A. Section III presents my proposals concerning ETG's capital structure and cost of debt. This section also briefly discusses the credit rating and business risk assessments. Section IV presents my cost of equity analyses and recommendation. This includes both the DCF and CAPM studies, with the majority of emphasis on the former. Section V is a critique of the cost of equity evidence submitted by Dr. Morin on behalf of ETG and his 11.25 percent cost of equity recommendation.

III. CAPITAL STRUCTURE, RISK AND OVERALL RETURN

A. Capital Structure/Cost of Debt

Q. WHAT CAPITAL STRUCTURE IS THE COMPANY UTILIZING IN THIS CASE?

A. The capital structure recommendation is provided by witness Michael Morely with input from Dr. Morin. His proposal is primarily a hypothetical capital structure based on the published capital structures from Dr. Morin's proxy gas company industry group. This produces a capital structure (excluding short-term debt) of 54 percent common equity and 46 percent long-term debt. Mr. Morely then layers in the estimated short-term debt percentage of the consolidated AGLR, which is 7.97 percent in his 6 + 6 update. The addition of the short-term debt means that the total debt ratio (i.e., short-term plus long-term) is 50.3 percent and common equity is 49.7 percent.

Q. HOW IS THE SHORT-TERM DEBT PERCENTAGE DETERMINED?

A. Mr. Morley states that short-term debt is a 2008 average for AGLR as a starting point. (It is not clear why he did not include any 2009 data in the 6 + 6 update.) Next, he observes that AGLR plans to issue $250 million of new long-term debt in 2009, and he assumes that the proceeds will be used to reduce short-term balances which in some months are quite high. Thus, the $250 million in long-term debt is subtracted from the actual 2008 average of short-term debt, producing an adjusted average balance of $329 million. This balance is 7.97 percent of AGLR's total projected capital at year-end 2009.

Q. IS IT PROPER TO INCLUDE SHORT-TERM DEBT IN CAPITAL STRUCTURE?

A. Yes, I believe it is appropriate since it helps to finance the Company's rate base and operations.

Q. DO YOU ACCEPT THE COMPANY'S ADJUSTED ESTIMATE OF SHORT-TERM DEBT?

A. I believe that the calculated 7.97 percent ratio for short-term debt is reasonable to use in this case. Schedule MIK-1, page 2 of 2 indicates a 12-month average for the period ending March 2009 to be $582 million, or $332 million after removing $250 million of long-term debt proceeds. This is nearly identical to Mr. Morely's figure. It seems plausible that at least a large portion of the $250 million of debt proceeds would be used to reduce short-term borrowings. However, unlike Mr. Morely, I do not use a $250 million debt issuance to reduce the *total* debt ratio. By comparison, Mr. Morely uses the $250 million to *reduce* the short-term debt ratio in his capital structure, but he then excludes this new issue from his long-term debt ratio. I accept the $250 million reduction in short-term debt, but I then include the $250 million in the balance long-term debt. Thus, under my recommendation, the $250 million planned debt issuance is neutral with respect to my debt/equity ratios. It only changes the mix between short-term and long-term debt.

My disagreement with Mr. Morely is not with his $250 million reduction to short-term debt, but rather I disagree with his decision to exclude the $250 million from long-term debt for capital structure purposes. Consistency requires including the $250 million in the long-term debt balance.

Q. HAVE THE COMPANY WITNESSES MADE A PERSUASIVE CASE FOR USING A HYPOTHETICAL CAPITAL STRUCTURE?

A. No, they have not. Dr. Morin seems to suggest that a hypothetical capital structure provides consistency with his use of proxy companies for cost of equity purposes.

However, he provides no evidence that ETG or AGLR at their actual capital structures are riskier than his proxy group companies. Moreover, if this consistency argument were to be true, it would imply that as a matter of policy the Board *always* must use a hypothetical capital structure to match capital structure and cost of equity.

Q. ARE THERE TIMES WHEN A HYPOTHETICAL CAPITAL STRUCTURE IS APPROPRIATE FOR RATEMAKING?

A. Yes. This approach should be considered if the utility's actual capital structure was judged to be uneconomic, departed drastically from industry norms or otherwise is highly distorted. None of those arguments applies (or is even alleged) in this case. The actual AGLR capital structure (which I will describe) seems to be well within industry norms, credit rating agency requirements and the Company's own target levels. For example, the response to RCR-COC-10 indicates a target equity ratio of 40 to 50 percent for AGLR and a 45 percent target equity ratio for ETG (as cited in the Board's Order in 2004 in Docket No. GF04090904). As discussed below, the AGLR estimated actual equity ratio of 46.1 percent is fully consistent with those targets. A hypothetical capital structure is not needed and would be improper in this case.

Q. DESPITE YOUR OPINION THAT A HYPOTHETICAL CAPITAL STRUCTURE IS NOT APPROPRIATE IN THIS CASE, DO YOU ACCEPT DR. MORIN'S ASSERTION THAT THE PROXY GROUP AVERAGE COMMON EQUITY RATIO IS 54 PERCENT?

A. Dr. Morin appears to have calculated this common equity ratio from data published by Value Line, but this calculation is problematic for several reasons.

As he acknowledges, his 54/46 capital structure excludes both short-term debt and the current maturities of long-term debt (i.e., long-term debt maturing within one year).

(See response to RCR-COC-9.) Mr. Morely does compensate for Value Line's absence of short-term debt by his inclusion of AGLR's (adjusted) short-term debt, but this means that his resulting capital structure is an inconsistent mix of company-specific actual and hypothetical capitalization balances.

A second concern is that Dr. Morin's 54 percent equity ratio does not match up very well with Value Line's forward-looking industry wide data for the gas industry. On June 12, 2009 (page 446) Value Line estimates a 2009 common equity ratio (again, excluding short-term debt) for its Natural Gas Utility industry of 48 percent, declining in the outyears to 46 percent. This is much lower than Dr. Morin's 54 percent.

Third, Mr. Morely argues that for ratemaking purposes Other Comprehensive Income ("OCI") should be deducted from equity, and he makes that adjustment in computing the AGLR short-term debt percentage. There is no indication that Dr. Morin made that adjustment in reporting his 54/46 capital structure.

Q. CAN YOU CORRECT THESE PROBLEMS?

A. In part. I have calculated the gas company common equity ratios for the nine proxy gas companies using Value Line reported data as of early 2009. This uses the "total debt" reported by Value Line and year-end 2008 common equity. It does not net out OCI from common equity as advocated by Mr. Morely. Noting these limitations, the results are as follows:

Table 1 Gas Utility Common Equity Ratios, 2009	
AGLR	44.4%
Atmos	44.7
LaClede Gas	43.8
NICOR	51.1
Northwest Natural	48.2
Piedmont	41.2
South Jersey Ind.	52.2
Southwest Gas	45.6
WGL Holdings	55.7
Average	**47.4%**

Source: *Value Line Investment Survey*, June 12, 2009

As Table 1 shows, the common equity ratios vary considerably from company to company, with an average of 47.4 percent. The average is very close to the AGLR actual equity ratio and my recommendation (from Mr. Morely's workpapers) of 46.1 percent. Moreover, of these nine companies, Table 1 shows that five have equity ratios below the 46.1 percent. This demonstrates that the 46.1 percent ratio (inclusive of short-term debt) is well within the zone of reasonableness, and the Company's departure in this case to a hypothetical capital structure is unwarranted. Moreover, the use of actual capital avoids the troublesome inconsistency of using a $250 million debt issuance to reduce the short-term debt percentage and then ignoring that same $250 million when setting the long-term debt ratio. The $250 million must be treated in a consistent fashion.

Q. HOW HAVE YOU CALCULATED YOUR RECOMMENDED CAPITAL STRUCTURE?

A. I have used Mr. Morely's adjusted short-term debt for AGLR (i.e., the $329 million) as discussed above. For consistency, I adopt his estimates of AGLR's long-term debt balance and common equity balance for year-end 2009 that he provides in his workpaper Exhibit MJM-12.6-A (6 + 6 update). I show these balances and resulting capital structure percentages on Schedule MIK-1, page 1 of 2. In my opinion, this capital structure is reasonable to use for ratemaking and cures the troubling consistency problems with the Company's approach discussed in this section.

Q. DO CREDIT RATING AGENCIES MAKE ANY USE OF HYPOTHETICAL CAPITAL STRUCTURES?

A. No. They base their evaluations and ratings on the Company's actual capital structure. The credit rating agencies have given ETG and AGLR single A ratings and have not raised objections to their actual capital structures.

B. <u>Cost of Debt</u>

Q. HOW HAS MR. MORELY CALCULATED THE COST OF LONG-TERM DEBT?

A. Mr. Morley's Exhibit MJM-12.6-A builds up the calculations of the embedded cost of debt based on all AGLR outstanding debt, including subsidiary debt. He also includes the planned $250 million long-term debt issue which is now scheduled for the third or fourth quarter 2009. This produces an embedded cost of debt, inclusive of all debt-related costs, of 6.15 percent.

Q. DO YOU ACCEPT HIS CALCULATION OF THE COST OF LONG-TERM DEBT?

A. Yes, with one modification. He uses an assumed 8.0 percent cost rate for the planned $250 million issuance. In my opinion, this cost rate is excessive. As I show on

Schedule MIK-2, single A utility bonds have been yielding 6.5 percent or less so far in 2009. For cost of debt purposes, I assume that the 8.0 percent cost rate for the new debt will be somewhat less, i.e., 7.0 percent, which is more in line with current market conditions. This correction reduces the embedded cost rate from 6.15 percent to 6.02 percent.

Q. IS THERE ANY ADDITIONAL EVIDENCE SUPPORTING YOUR COST OF DEBT ADJUSTMENT?

A. Yes. The Company's response to RCR-COC-39 indicates that a more current estimate of the planned cost of new debt issue is in the range of 6.5 to 7.5 percent. Hence, my 7.0 percent figure is the midpoint of this updated range. On August 12, 2009, I received an update to RCR-COC-39 indicating that the amount to be issued would increase to $300 million, the debt would be for a term of ten years, and the estimated interest rate would be 5.25 percent. I therefore anticipate updating both capital structure and the cost of debt at a later date to incorporate these changes.

Q. WHAT COST RATE DOES MR. MORELY USE FOR SHORT-TERM DEBT?

A. He proposes 2.74 percent, which appears to be an average cost for AGLR in 2008.

Q. IS THIS A REASONABLE COST RATE TO BE USING AT THIS TIME?

A. No, I believe that it is unrealistically high given current market conditions. The 2008 cost rates reflect the financial crisis (which for credit-worthy corporations has abated) and very different Fed regulatory policies than exist today. So far in 2009, AGLR's short-term debt cost rates have averaged about 1.2 percent. While the short-term debt data for ETG currently available to me only extend through March 2009, data published by the Federal Reserve continue to show commercial paper cost rates at

below 1.0 percent through the first half of 2009. As a result, I have replaced Mr. Morely's 2.75 percent out-of-date cost rate with a more current 1.2 percent.[2]

Q. WILL THE CURRENT LOW COST RATES FOR SHORT-TERM DEBT CONTINUE FOR THE REST OF 2009 AND BEYOND?

A. In all likelihood, yes. There is every indication that current low cost rates for short-term debt will continue due to market conditions (low or zero inflation and a weak economy) and Fed policy direction.

The best evidence of the continuation of today's low short-term interest rates comes from the Minutes of the Federal Open Market Committee, the June 23-24, 2009 meeting, as published on July 15, 2009.[3] The press release accompanying the release of the minutes states the Fed's commitment to support economic recovery and macroeconomic price stability. The Committee "expects that inflation will remain subdued for some time" and it observes that "conditions in financial markets have generally improved in recent months". However, due to continued weakness in the U. S. economy the "Committee will maintain the target range for the federal funds rate at 0 to ¼ percent" and will continue that policy of exceptionally low interest rates "for an extended period." Chairman Bernanke confirmed the Fed's low interest rate policy (i.e., near zero interest rates) for the foreseeable future (until economic recovery takes hold or inflationary pressures emerge) in his semiannual Congressional testimony presented on July 21 and 22.

Given these strong policy statements from the Fed, it is clear that the current low interest rate environment will continue for quite some time. It is therefore

[2] The recently received response to RCR-ROR-36 indicates an average cost rate January through June 2009 of 1.5 percent. However, this small increase appears to be due to an anomalous 2.95 percent cost rate in April 2009. I expect to update for any material change in the cost of short-term date prior to hearings.
[3] www.federalreserve.gov/newsevents/press/monetary/20090624a.htm.

appropriate to use 1.2 percent which is the AGLR actual short-term debt rate so far this year.

C. ETG/AGLR Risk Attributes

Q. HOW ARE ETG AND AGLR REGARDED BY INVESTORS?

A. Both ETG and AGLR are regarded as low risk companies by investors, although AGLR is seen as at least slightly riskier than ETG due to its non-utility operations. Important examples of such assessments include Value Line and credit rating agency reports. Even certain statements by Dr. Morin confirm these assessments.

Value Line observes that the natural utility gas companies (including AGLR) are currently regarded well by investors due to their "defensive characteristics".

> Natural Gas utilities tend to offer predictable cash flows, healthy dividend yields, and generally have solid balance sheets. Accordingly, these stocks have been increasingly sought after by investors over the past year. (Value Line, page 446, June 12, 2009)

Value Line's industry report further notes that these companies have "provided a fairly safe haven amid the recessionary environment" and specifically singles out AGLR for its "steady cash flow." *Id.* Value Line also observes that gas company non-regulated operations, while relatively modest in size, "add a greater degree of risk to the businesses that utilize the strategy." *Id.*

Dr. Morin confirms the low risk nature of gas utilities in his discussion of "betas" in response to RCR-COC-14. He interprets the declines in gas utility betas to the investor "flight to quality precipitated by the financial crisis." In other words, financial market disruptions increase the relative attractiveness ("flight to quality") of these conservative gas utility stocks.

Q. WHAT IS THE ASSESSMENT OF CREDIT RATING AGENCIES?

A. The Company has provided recent credit rating reports for ETG and AGLR in response to RCR-COC-3 prepared by Standard & Poors ("S&P"), Moody's Investor Service ("Moody's") and FitchRatings ("Fitch"). All three agencies rate ETR (i.e., Pivotal) and AGLR as low single A. Similarly, all three agencies explain that AGLR is rated single A because it is mostly utility, and they clearly state that the non-regulated activities are riskier. Moody's states that non-utility activities "entail higher business risks." (May 29, 2008) S&P states that non-utility businesses have cash flows that are more "volatile and competitively exposed." It further lists the unregulated activities as a ratings weakness. (March 3, 2009) Fitch also notes the higher risk of the non-regulated businesses of AGLR. (July 21, 2008)

By comparison, the rating agencies discuss the low risk attributes of ETG and the other utility subsidiaries (principally Atlanta Gas Light). Moody's states, "AGLR's ratings reflect the stable, strong cash flow of its predominant regulated gas distribution subsidiaries." In the case of Pivotal, Moody's finds that its "regulatory framework is reasonable." (May 29, 2008) S&P states:

> AGL's relatively low business risk stems from its regulated utilities, all of which benefit from supportive regulatory jurisdictions that minimize commodity price and weather-related risk and possess strong operations profiles. (September 25, 2008)

Fitch refers to the "low-risk utility operations" as a ratings strength. (July 21, 2008)

Q. DOES DR. MORIN AGREE THAT THE UTILITY OPERATIONS ARE LESS RISKY THAN AGLR'S NON-UTILITY OPERATIONS?

A. Dr. Morin was asked in RCR-COC-22 whether he believes there is a cost of capital difference between ETG and AGLR. The response states that Dr. Morin sees little material difference in risk because utility operations "constitute the vast majority" of

AGLR. However, he does not contest the notion that the non-utility activities are riskier.

While Dr. Morin is correct that AGLR is viewed mostly as a utility company, the non-utility operations are not negligible. The credit rating reports estimate the utility portion to be roughly 70 to 75 percent of total AGLR, depending on which measure is used. Thus, it is plausible that ETG could have a cost of equity that is slightly lower than AGLR and the gas industry proxy group, although this small difference would be difficult to quantify.

IV. COST OF COMMON EQUITY CALCULATIONS

A. Using the DCF Model

Q. WHAT STANDARD ARE YOU USING TO DEVELOP YOUR RETURN ON EQUITY RECOMMENDATION?

A. As a general matter, the ratemaking process is designed to provide the utility an opportunity to recover its (prudently-incurred) costs of providing utility service to its customers, including the reasonable costs of financing its (used and useful) investment. Consistent with this "cost-based" approach, the fair and appropriate return on equity award for a utility is its cost of equity. The utility's cost of equity is the return required by investors (i.e., the "market return") to acquire or hold that company's common stock. A return award greater than the market return would be excessive and would overcharge customers for utility service. Similarly, an insufficient return could unduly weaken the utility and impair incentives to invest.

Although the *concept* of the cost of equity may be precisely stated, its quantification poses challenges to regulators. The market cost of equity, unlike most other utility costs, cannot be directly observed (i.e., investors do not directly, unambiguously state their return requirements), and it therefore must be estimated using analytic techniques. The DCF model is one such prominent technique familiar to analysts, this Board and other utility regulators.

Q. IS THE COST OF EQUITY A FAIR RETURN AWARD FOR THE UTILITY AND ITS CUSTOMERS?

A. Generally speaking, I believe it is. A return award commensurate with the cost of equity generally provides fair and reasonable compensation to utility investors and normally should allow efficient utility management to successfully finance its operations on reasonable terms. Certainly, this has been the case for New Jersey

utilities based on the equity returns granted by the Board in recent years. Setting the return on equity equal to a reasonable estimate of the cost of equity also is generally fair to ratepayers.

I recognize that there can be exceptions to this general rule. For example, in some instances, utilities have sought rate of return adders as a reward for asserted good management performance. In this case, it does not appear that the Company is making an explicit request for a performance adder, and therefore the issue is one of *measuring* the cost of equity, not whether a properly measured cost of equity is fair return.

Q. WHAT DETERMINES A COMPANY'S COST OF EQUITY?

A. It should be understood that the cost of equity is essentially a market price, and as such, it is ultimately determined by the forces of supply and demand operating in financial markets. In that regard, there are two key factors that determine this price. First, a company's cost of equity is determined by the fundamental conditions in capital markets (e.g., outlook for inflation, monetary policy, changes in investor behavior, investor asset preferences, the general business environment, etc.). The second factor (or set of factors) is the business and financial risks of the Company in question. For example, the fact that a utility company effectively operates as a regulated monopoly, dedicated to providing an essential service (in this case water utility service), typically would imply very low business risk and therefore a relatively low cost of equity. ETG's relatively low business risks and the favorable assessment by the various credit rating agencies (i.e., S&P) also contribute to its relatively low cost of equity.

Q. DOES DR. MORIN INCORPORATE THESE PRINCIPLES IN HIS TESTIMONY?

A. In general, I believe he attempts to incorporate these principles in conducting his DCF analysis. However, some of his non-DCF analyses do not adhere as closely to these principles. For example, risk premium and comparable earnings studies used by some analysts make excessive use of historical or non-market (i.e., pure accounting-type) data to derive equity return results.

Q. WHAT METHODS ARE YOU USING IN THIS CASE?

A. I employ both the DCF and CAPM models, applied to a proxy group of utility companies. However, for reasons discussed in my testimony, I emphasize the DCF model results in formulating my recommendation. It has been my experience that most utility regulatory commissions (federal and state) heavily emphasize the use of the DCF model to determine the cost of equity and setting the fair return. As a check (and partly to respond to Dr. Morin), I also perform a CAPM study which also is based on the same proxy group companies used in my DCF study.

Q. PLEASE DESCRIBE THE DCF MODEL?

A. As mentioned, this model has been widely relied upon by the regulatory community, including by this Board. Its widespread acceptance among regulators is due to the fact that the model is market-based and is derived from standard economic/financial theory. The model is also transparent and understandable to regulators. I do not believe that an obscure or highly arcane model would receive the same degree of regulatory acceptance.

The theory begins by recognizing that any publicly-traded common stock (utility or otherwise) will sell at a price reflecting the discounted stream of cash flows *expected by investors*. The objective is to estimate that discount rate.

Using certain simplifying assumptions (that I believe are generally reasonable for utilities), the DCF model for dividend paying stocks can be distilled down as follows:

$K_e = (Do/Po)\ (1 + 0.5g) + g$, where:

K_e = cost of equity;

Do = the current annualized dividend;

Po = stock price at the current time; and

g = the long-term annualized dividend growth rate.

This is referred to as the constant growth DCF model, because for mathematical simplicity it is assumed that the growth rate is constant for an indefinitely long time period. While this assumption may be unrealistic (or not fully realistic) in many cases, for traditional utilities (which tend to be more stable than most unregulated companies) the assumption generally is reasonable, particularly when applied to a group of companies.

Q. HOW HAVE YOU APPLIED THIS MODEL?

A. Strictly speaking, the model can be applied only to publicly-traded companies, i.e., companies whose market prices (and therefore market valuations) are transparently revealed. Consequently, the model cannot be applied to ETG, which is a wholly-owned subsidiary of AGLR, and therefore a market proxy is needed. In theory, AGLR could serve as that market proxy and, in fact, I include AGLR as one of my nine proxy gas companies. More important, I am reluctant to rely upon a single-company DCF study (nor does Dr. Morin), although in theory that approach could be used.

In any case, I believe that an appropriately selected proxy group (preferably one reasonable in size) is likely to be more reliable than a single company study. This is because there is "noise" or fluctuations in stock price (or other) data that cannot always be readily accounted for in a simple DCF study. The use of an appropriate and robust proxy group helps to allow such "data anomalies" to cancel out in the averaging process.

For the same reason, I prefer to use market data that are relatively current but averaged over a period of several months (i.e., six months) rather than purely relying upon "spot" market data. It is important to recall that this is not an academic exercise but involves the setting of "permanent" utility rates that are likely to be in effect for several years. The practice of averaging market data over a period of several months can add stability to the results.

Q. ARE YOU EMPLOYING THE DCF MODEL USING A GAS UTILITY PROXY GROUP?

A. I am using a proxy group that consists of nine of the twelve companies included in the Value Line Gas Industry Group data base. Dr. Morin uses these same nine companies for his gas utility proxy group, and in that sense we are in precise agreement. However, Dr. Morin then goes on to employ other proxy groups that seem to be predominantly electric utilities or even companies with large merchant generation operations.

Q. WHAT VALUE LINE GAS COMPANIES HAVE YOU ELIMINATED?

A. I have eliminated New Jersey Resources, UGI and NiSource. The first two were also eliminated by Dr. Morin due to their relatively large non-regulated operations, and NiSource is a vertically-integrated electric company. With these three eliminations, Dr. Morin and I have identical gas proxy groups.

B. DCF Study Using the Proxy Group of Gas Distribution Utility Companies

Q. PLEASE DESCRIBE YOUR GAS PROXY GROUP.

A. The nine gas utility companies in my group of proxy companies are listed on Schedule MIK-3, page 1 of 1, along with several risk indicators. The measures include Value Line's Safety and Financial Strength ratings, beta and the 2008 common equity ratio. In general, it appears that AGLR is similar in risk and investment quality to the other companies comprising the proxy group.

It should be noted that although the proxy companies are primarily regulated utilities, some also have some non-regulated operations that may be perceived as riskier than utility operations (e.g., energy marketing). In fact, Dr. Morin provides the percentage of regulated revenue for each company on his Exhibit RAM-2. This averages to 70 percent for the nine companies. I make no specific adjustment to my DCF cost of capital results or my final recommendation for the effects of those potentially riskier non-regulated operations.

Q. HAVE EITHER YOU OR DR. MORIN PROPOSED A SPECIFIC RISK ADJUSTMENT TO THE COST OF EQUITY BETWEEN THE PROXY COMPANIES AND ETG?

A. No, not specifically. However, Dr. Morin does indicate that he would raise his recommendation from 11.25 percent to 11.5 percent if the Company's decoupling request in this case is not granted (i.e., the EUI request). It is not clear how he quantified the 25 basis point adjustment. In addition, he proposes an adjustment to his equity return recommendation in the event that a different capital structure is adopted.

Q. HOW HAVE YOU APPLIED THE DCF MODEL TO THIS GROUP?

A. I have elected to use a six-month time period to measure the dividend yield component (Do/Po) of the DCF formula. Using the Standard & Poor's *Stock Guide*, I compiled the month-ending dividend yields for the six months ending June 2009, the most recent data available to me as of this writing. This covers nearly all of the first half of 2009, a period of some financial distress but also some gradual improvement in markets, as noted by the Fed Minutes in June 2009.

I show these dividend yield data on page 2 of Schedule MIK-4 for each month and each proxy company, January through June 2009. Over this six-month period the group average dividend yields were relatively stable, ranging from a low of 4.27 percent in January to 4.90 percent in May 2009, averaging 4.64 percent for the full six months.

For DCF purposes and at this time, I am using a proxy group dividend yield of 4.64 percent.

Q. IS 4.64 PERCENT YOUR FINAL DIVIDEND YIELD?

A. Not quite. Strictly speaking, the dividend yield used in the model should be the value the investor expects over the next 12 months. Using the standard "half year" growth rate adjustment technique, the DCF adjusted yield becomes 4.8 percent. This is based on assuming that half of a year of dividend growth is 2.75 percent (i.e., a full year growth is 5.5 percent).

Q. DOES DR. MORIN EMPLOY THE SAME GROWTH RATE ADJUSTMENT?

A. No, I do not believe so. Based on his exhibits it appears that he adds the full growth rate rather than one-half. The half-year growth rate has become fairly standard among rate of return practitioners. Dr. Morin's approach would improperly add about 0.1 percent to the DCF result.

Q. HOW HAVE YOU DEVELOPED YOUR GROWTH RATE COMPONENT?

A. Unlike the dividend yield, the investor growth rate cannot be directly observed but instead must be inferred through a review of available evidence. The growth rate in question is the *long-run* dividend per share growth rate, but analysts frequently use earnings growth as a proxy for (long-term) dividend growth. This is because in the long-run earnings are the ultimate source of dividend payments to shareholders, and this is likely to be particularly true for a large group of utility companies.

One possible approach is to examine historical growth as a guide to investor expected future growth, for example the recent five-year or ten-year growth in earnings, dividends and book value per share. However, my experience with utilities in recent years is that these historic measures have been very volatile and are not reliable as prospective measures. This is due in part to extensive corporate or financial restructuring, particularly in the electric industry. I note that Dr. Morin does not make use of historical growth rates as an indicator of prospective growth for his proxy companies, but he does rely on historic data for his risk premium study.

The DCF growth rate should be prospective, and one useful source of information on prospective growth is the projections of earnings per share (typically five years) prepared and published by securities analysts. It appears that Dr. Morin places exclusive weight on this information for his DCF studies, and I agree that it warrants substantial though not necessarily exclusive emphasis.

Q. PLEASE DESCRIBE THIS GROWTH RATE EVIDENCE.

A. Schedule MIK-4, page 3 presents four well-known sources of projected earnings growth rates. Three of these four sources -- First Call, Zacks and CNNfn -- provide averages from securities analyst surveys conducted by or for these organizations (typically the median value). The fourth, Value Line, is that organization's own

estimates. Value Line publishes its own projections using annual average earnings for a base period of 2006-2008 compared to a forecast period of 2012-2014.

As this schedule shows, the growth rates for individual companies vary somewhat among the four sources, but none of the four differs greatly from the overall average. These are 5.6 percent for CNNfn, 5.08 percent for First Call, 6.40 percent for Zacks and 4.11 percent for Value Line. It should be noted that Value Line is somewhat lower than the other three sources, while Zacks is somewhat higher. For that reason, it is particularly useful to average together the four sources, which produces an overall average of 5.3 percent. To recognize uncertainty, I have identified a reasonable range of 5.0 to 5.5 percent which surrounds the 5.3 percent average.

Q. IS THERE ANY OTHER EVIDENCE THAT SHOULD BE CONSIDERED?

A. Yes. There are a number of reasons why investor expectations of long-run growth could differ from the limited, five-year earnings projections from securities analysts. Consequently, while securities analyst estimates should be considered and given substantial weight, these growth rates should be subject to a reasonableness test and corroboration, to the extent feasible.

On Schedule MIK-4, page 4 of 4, I have compiled three other measures of growth published by Value Line, i.e., growth rates of dividends and book value per share and long-run retained earnings growth. (Retained earnings growth reflects the growth over time one would expect from the reinvestment of retained earnings, i.e., earnings not paid out as dividends.) As shown on this schedule, these growth measures tend to be similar to or less than analyst growth projections. For the group, dividend growth averages 3.3 percent, book value growth averages 4.3 percent, and

earnings retention growth averages 4.8 percent. These three measures would tend to support gas utility DCF growth rates somewhat less than 5.0 percent.

Q. WHAT IS YOUR DCF CONCLUSION?

A. I summarize my DCF analysis on page 1 of Schedule MIK-4. The adjusted dividend yield for the six months ending June 2009 is 4.8 percent for this group. Available evidence would support a long-run growth rate in the range of approximately 5.0 to 5.5 percent (or less), as explained above. Summing the adjusted yield and growth rates produces a total return range of 9.8 percent to 10.3 percent, and a midpoint result of 10.05 percent. Based on this DCF range, I recommend a return of 10.1 percent.

Q. DO YOU INCLUDE AN ADJUSTMENT FOR FLOTATION EXPENSE?

A. A company can incur flotation expenses when engaging in a public issuance of common stock to support its growth in investment. It might choose to do so and incur this cost if retained earnings growth (and other capital sources such as dividend reinvestment programs) are insufficient to provide the needed equity capitalization. A public issuance typically involves significant underwriting fees and other administrative expenses, which the utility may seek to recover as a cost of equity adder.

Dr. Morin proposed a flotation cost adder of 0.2 to 0.3 percent, but he is not able to provide any supporting cost data that is specific to ETG (or to AGLR). Such costs, of course, would be specific to AGLR since it is the parent that would incur these costs.

The response to RCR-COC-15 states that AGLR has not undertaken a public stock issuance within the last three years. The response to RCR-COC-16 further indicates that there are no plans for a public stock issuance by AGLR for the

foreseeable future. Hence, I am unable to identify any actual flotation costs to recover, and a flotation cost adjustment to rate of return is not appropriate.

C. The CAPM Analysis

Q. PLEASE DESCRIBE THE CAPM MODEL.

A. The CAPM is a form of the "risk premium" approach and is based on modern portfolio theory. Based on my experience, the CAPM is the cost of equity method most often used in rate cases after the DCF method, and it is one of Dr. Morin's three cost of equity methods. (He also employs a risk premium study.)

According to this model, the cost of equity (K_e) is equal to the yield on a risk-free asset plus an equity risk premium multiplied by a firm's "beta" statistic. "Beta" is a firm-specific risk measure which is computed as the movements in a company's stock price (or market return) relative to contemporaneous movements in the broadly defined stock market (e.g., the S&P 500 or the New York Stock Exchange Composite). This measures the investment risk that cannot be reduced or eliminated through asset diversification (i.e., holding a broad portfolio of assets). The overall market, by definition, has a beta of 1.0, and a company with lower than average investment risk (e.g., a utility company) would have a beta below 1.0. The "risk premium" is defined as the expected return on the overall stock market minus the yield or return on a risk-free asset.

The CAPM formula is:

$K_e = R_f + \beta (R_m - R_f)$, where:

K_e = the firm's cost of equity

R_m = the expected return on the overall market

R_f = the yield on the risk free asset

β = the firm (or group of firms) risk measure.

Two of the three principal variables in the model are directly observable -- the yield on a risk-free asset (e.g., a Treasury security yield) and the beta. For example, Value Line publishes estimated betas for each of the companies that it covers and Dr. Morin uses those betas to the exclusion of all other sources. The greatest difficulty, however, is in the measurement of the expected stock market return (and therefore the risk premium), since that variable cannot be directly observed.

While the beta itself also is "observable," different investor services provide different estimates of betas depending on the calculation methods that they use. Potentially, these differences can have large impacts on the CAPM results. In this case, both Dr. Morin and I use Value Line published betas, but I note that other sources have somewhat different gas utility betas, which would yield lower results. For that reason, I have incorporated other published sources, along with Value Line, to obtain a range of betas for comparative purposes. This is analogous to the procedure followed by Dr. Morin and me in using multiple published sources for DCF earnings growth rates rather than relying on just one source.

Q. HOW HAVE YOU APPLIED THIS MODEL?

A. For purposes of my CAPM analysis, I have used a long-term Treasury yield as the risk-free-return along with the average beta for the natural gas proxy company group. (See Schedule MIK-5, page 3 of 3, for the company-by-company betas.) In last six months, long-term Treasury yields have averaged approximately 4.0 percent, and the recent Value Line betas for my proxy group average 0.67. However, the Value Line betas generally tend to be higher than other available published betas, and the proxy group average for the three public sources that I have identified (Value Line, Yahoo Finance and MSN Money) averages to 0.46. I note that Dr. Morin has elected to use a beta of 0.82 for the gas and electric companies (obtained from Value Line). His

higher betas may be due to timing. That is, Value Line betas for gas utilities have been declining, and his figures are from January 2009 while mine are from June 2009. Finally, and as explained below, I am using a equity risk premium of 5 to 8 percent, although I see less support for the upper end of that range.

Using these data inputs, the CAPM calculation results are shown on page 1 of Schedule MIK-5. My low-end cost of equity estimate uses a risk-free rate of 4.0 percent, a proxy group beta of 0.80 and an equity risk premium of 5 percent.

$$K_e = 4.0\% + 0.67\ (5.0) = 7.35\%$$

The upper end estimate uses a risk-free rate of 4.0 percent, a proxy group beta of 0.67 and an equity risk premium of 8.0 percent.

$$K_e = 4.0\% + 0.67\ (8.0) = 9.36\%$$

Thus, with these inputs the CAPM provides a cost of equity range of 7.4 to 9.4 percent, with a midpoint of 8.4 percent. The CAPM analysis produces a midpoint result lower than the range of results from my gas group DCF analysis, but I have not placed reliance on the CAPM returns in formulating my return on equity recommendation in this case. This is because Treasury yields at this time are abnormally low due to the "flight to quality" problem that I discussed earlier. At the present time the CAPM may understate the utility cost of equity due to the highly abnormal capital market conditions.

Q. WHAT RESULT WOULD YOU OBTAIN USING DR. MORIN'S MARKET RISK PREMIUM?

A. For his CAPM studies, Dr. Morin has selected a market risk premium of 7.1 percent. In conjunction with a current gas utility industry beta of 0.67 (based on Value Line data) and a 4.0 percent Treasury bond yield, the CAPM produces:

$$K_e = 4.0\% + 0.67\ (7.1) = 8.8\%$$

Q. IT APPEARS THAT A KEY ELEMENT IN YOUR CAPM STUDY IS YOUR EQUITY MARKET RETURN RISK PREMIUM OF 5 TO 8 PERCENT. HOW DID YOU DERIVE THAT RANGE?

A. There is a great deal of disagreement among analysts regarding the reasonably expected market return on the stock market as a whole, and therefore, the risk premium. In my opinion, a reasonable risk premium to use would be about 6 percent, which today would imply a stock market return of 10.0 percent (i.e., 6.0 + 4.0 = 10.0 percent). Due to uncertainty concerning the true market return value, I am employing a broad range of 5 to 8 percent as the overall market rate of return, which would imply a market equity return of 9 to 12 percent for the overall stock market.

Q. DO YOU HAVE A SOURCE FOR THAT RANGE?

A. Yes. The well-known finance textbook by Brealey, Myers and Allen (*Principles of Corporate Finance,* 8th Edition) reviews a broad range of evidence on the equity risk premium. The authors of the risk premium literature conclude:

> Brealey, Myers and Allen have no official position on the issue, but we believe that a range of 5 to 8 percent is reasonable for the risk premium in the United States. (page 154)

I would note that Dr. Morin's 7.1 percent premium falls comfortably within that range, and my "preferred" 6 percent is also within that range.

There is one important caveat to consider here regarding the 5 to 8 percent range that the authors believe is supported by the professional risk premium literature. It appears that the 5 to 8 percent range is specified relative to short-term Treasury yields, not long-term Treasury yields. At this time, the application of the CAPM using short-term Treasury yields would not be meaningful because those yields in recent months have approximated zero. It therefore could be argued that the 5 to

8 percent range of Brealy *et al*. is overstated if a long-term Treasury yield is used as the risk-free rate.

Q. WHAT IS THE SOURCE OF YOUR 0.67 BETA?

A. This figure approximates the average beta for the gas utilities published by Value Line, as shown on page 3 of Schedule MIK-5. Please note that betas from other sources (MSNMoney and YahooFinance) are significantly lower than Value Line and therefore would imply a lower CAPM estimate. However, due to the somewhat low yields on Treasury bonds at the present time, I do not place much weight on the CAPM in developing a return on equity recommendation for ETG in this case.

V. REVIEW OF DR. MORIN'S RECOMMENDATION

A. Recommendation Overview

Q. HOW DID DR. MORIN DEVELOP HIS 11.25 PERCENT RECOMMENDATION?

A. Dr. Morin employs three cost of equity approaches, using a range of proxy companies and data inputs. These studies produce a fairly wide range of results, from approximately 9 to 13 percent. He develops his 11.25 percent recommendation by averaging the results of these various studies. It should be noted that his study results are inclusive of a flotation cost recovery factor of 0.2 to 0.3 percent, and therefore his studies and presumably his recommendation would average to about 11.0 percent absent the inclusion of this factor.

It should be noted that Dr. Morin's studies appear to be based mostly on market data from January 2009, and he did not submit an update in conjunction with the Company's 6 + 6 filing in late June 2009. His testimony states that he may submit an update later in this case.

For convenience, I reproduce Dr. Morin's summarization of his cost of equity study results from page 70- 71 of his testimony (inclusive of his flotation adjustments):

1.	CAPM	9.60%
2.	Empirical CAPM	9.90
3.	Risk Premium	11.30
4.	Gas DCF (Value Line)	9.55
5.	Gas DCF (Zacks)	11.70
6.	Gas/Electric DCF (Value Line)	13.04
7.	Gas/Electric DCF (Zacks)	13.20
	Average	**11.18%**

The mean of these seven studies is 11.18 percent and the median is 11.3 percent.

Q. ARE ALL SEVEN STUDIES LISTED ABOVE BASED ON PROXY GROUPS?

A. Yes. Dr. Morin relies primarily on two proxy groups: (1) the gas utility group, which is identical to my gas company group; and (2) a group of 24 companies that he refers to as "combination gas and electric utilities". These two groups are used with his CAPM and DCF studies. In addition, he uses an electric utility group (a group that appears to be somewhat similar to his gas and electric combination group) for his risk premium study. The study results cited above are those obtained for these proxy groups.

Q. DOES DR. MORIN PROPOSE ANY RISK ADJUSTMENTS TO COMPENSATE FOR COST OF CAPITAL DIFFERENCES BETWEEN ETG (OR AGLR) AND THE PROXY GROUPS?

A. No, not in formulating his 11.25 percent return on equity recommendation. I do not read his testimony as suggesting in any way that ETG is viewed by investors as either riskier or less risky than the proxy group averages. However, he does suggest that two return on equity adjustments may be needed if certain Company ratemaking proposals in this case are not adopted. First, he would increase his 11.25 percent return to 11.5 percent if the Board does not adopt the Company's revenue decoupling proposal, i.e., a 25 basis point cost of equity premium. Second, he would increase his recommendation by about 40 to 50 basis points if actual capital structure (a 46 percent equity ratio) is used in place of the hypothetical capital structure proposed by Mr. Morely.

Q. DOES DR. MORIN EXPLAIN HIS CALCULATIONS FOR THESE TWO ADJUSTMENTS?

A. He describes his estimate of the cost of equity adjustment for the capital structure issue. However, it is not clear how he derives his 25 basis point adder relating to the decoupling proposal.

Q. DR. MORIN DISCUSSES THE TURMOIL IN FINANCIAL MARKETS WHICH BECAME EVIDENT IN 2008 AND WAS STILL PRESENT IN JANUARY 2009 WHEN HE PREPARED HIS TESTIMONY. HAS THIS AFFECTED HIS COST OF CAPITAL RECOMMENDATION?

A. I see no evidence that this "turmoil" has resulted in a higher cost of capital estimate from Dr. Morin for ETG. RCR-COC-12 requested his gas utility rate of return on equity recommendations for the past three years prior to this case. His response indicates that his recommendation for 2006 to 2008 in gas utility cases was for equity returns of 11.0 to 11.75 percent. His current recommendation of 11.25 percent is similar and falls within his 2006 to 2008 range of recommendations.

Q. DR. MORIN HAS SUBMITTED IN THIS CASE SEVEN COST OF EQUITY STUDIES USING BOTH GAS UTILITIES AND ELECTRIC COMPANIES. WHAT COST OF EQUITY RESULTS DID HE OBTAIN FROM THE STUDIES THAT ARE BASED ON HIS GAS UTILITY GROUP?

A. Of his seven studies, four are based on the gas utility proxy group (i.e., two CAPM studies and two DCF studies) and three are based on groups that are predominantly electric companies. His four gas company studies produce cost of equity results that vary from 9.55 percent to 11.70 percent, averaging 10.2 percent. If the flotation adjustment is removed, the average declines to about 10.0 percent. These results are notable because they demonstrate that the differences in our respective return on equity recommendations is attributable largely to Dr. Morin's decision to include

three additional studies based predominantly on electric companies. The use of the electric companies in this case tends to distort his cost of equity results and recommendation. This is particularly true because of the presence of the relatively risky merchant generation operations for many of these companies.

B. The DCF Results

Q. HOW DOES DR. MORIN'S DCF ANALYSIS DIFFER FROM YOURS?

A. Setting aside the flotation cost issue, which I have already addressed, Dr. Morin employs two proxy groups (gas companies and gas/electric companies) to prepare his DCF studies whereas my analysis focuses specifically on gas companies. Other than the timing of when our respective studies were prepared, our two gas utility DCF studies are fairly similar. Specifically, he obtains cost of equity estimates of 11.47 percent using the Zacks growth rates and 9.33 percent using the Value Line growth rates, in both cases before flotation costs. The average of the two is 10.4 percent which is somewhat above my 10.1 percent midpoint. However, since January 2009 both the Value Line and Zacks projected earnings growth rates have declined by roughly a full percentage point, and thus updating would probably narrow the differences between our respective DCF study results. The growth rate reductions since January may be a reflection of the increased recognition by analysts of the current economic recession. The very weak economic outlook means that earnings growth going forward is likely to be slow.

One other difference is that Dr. Morin employs only two sources of earnings growth rates whereas I employ four. My two additional sources are Thomson First Call and CNNfn. In response to RCR-COC-21, Dr. Morin explains that he selected the Zacks survey partly as a matter of convenience and because it is a widely used

data source. However, the response also states that he "does not object to the use of other sources of growth forecasts."

Like Dr. Morin, I also use Value Line and Zacks but in conjunction with the other two sources of earnings growth rates. While I believe it is advantageous to use all four sources of growth rates, using only Value Line and Zacks would not significantly alter my DCF results.

Q. DO YOU OBJECT TO THE GAS/ELECTRIC COMPANY GROUP?

A. Yes. All 24 of these companies are classified by Value Line as electrics, and almost all have and are dominated by their generation operations.[4] Some of these companies are traditional, vertically-integrated electric utilities, but others are among the largest players in the unregulated merchant generation business and therefore are exposed to those extreme commodity risks. This includes such well-known companies as Duke Energy, Exelon, Public Services Enterprise Group, Entergy Corporation, and PPL Corp. The risk profile of this group, and particularly the large merchant generation companies, has little in common with the monopoly regulated gas distributions operations of ETG.

It is hardly surprising that Dr. Morin obtained far higher DCF results for this group, a cost of equity of approximately 13 percent compared to 10.4 percent for the gas utility group. Integrated electrics and merchant power should *not* be used as a risk proxy for ETG to set the fair rate of return in this case.

[4] It appears that only three of the proxy electrics (Consolidated Edison, Northeast and NSTAR) have little or no generation.

C. CAPM Analysis

Q. ONE OF DR. MORIN'S PRINCIPAL METHODS IS CAPM. DO HIS CAPM STUDIES CONFLICT WITH YOUR RETURN ON EQUITY RECOMMENDATION IN THIS CASE?

A. Both Dr. Morin and I obtain CAPM cost of equity results below 10 percent which supports the reasonableness of my 10.1 percent recommendation. For that reason, I discuss his CAPM analyses only briefly.

Q. DR. MORIN PREPARED HIS CAPM ANALYSES IN JANUARY 2009. DOES THE TIMING OF HIS STUDY AFFECT THE RESULTS?

A. Yes. However, updating would modify the inputs somewhat. At page 42, he calculates a 9.3 percent CAPM cost of equity for ETG using a Treasury bond yield of 3.5 percent, a proxy group average beta of 0.82 and a stock market risk premium (based on long-term market returns) of 7.1 percent:

$$3.5\% + 0.82\ (7.1) = 9.3\%$$

Since January, Treasury bond yields have increased to about 40 to 4.5%, the Value Line gas utility betas have declined to 0.67 and the historic risk premium has declined from 7.1 to 6.5 percent. Using the updated parameters, including an upper end 4.5 percent Treasury yield, the CAPM for ETG becomes 8.9 percent.

$$4.5\% + 0.67\ (6.5) = 8.9\%$$

Thus, although Dr. Morin's CAPM results set forth in his testimony are below 10.0 percent, updating would produce even lower estimates.

Q. WHY DOES UPDATING LEAD TO A LOWER MARKET RISK PREMIUM FACTOR?

A. Dr. Morin employs historic market returns data over a long time period as the measure of the equity risk premium. In doing so, he selects the "income" return (i.e.,

the total return on stocks minus the income return on bonds) for a historic time period that ends in 2007. The data for 2008 apparently were not yet available at the time he prepared his testimony. In response to RCR-ROR-20, he provided the same risk premium information but now incorporating into the long-term historic average 2008 data. With this update, the historic risk premium ("income" measure) falls from 7.1 to 6.5 percent, due to the well-known 2008 stock market losses. It is important to note that the "income" risk premium is calculated by including the realized capital gains on stocks but excluding the realized capital gains on bonds. This is inconsistent. The response to RCR-COC-20 indicates that the updated equity risk premium calculated in a consistent manner (i.e., with the total return on bonds) is 5.6 percent. The use of this more conventional risk premium measure would produce an even lower CAPM cost of equity.

Q. DO YOU HAVE ANY METHODOLOGICAL DISAGREEMENT WITH DR. MORIN'S CAPM?

A. In addition to using the standard or conventional CAPM, Dr. Morin also employs the Empirical CAPM (ECAPM). This calculation is a weighted average of the standard CAPM (given a 75 percent weight) and an alternative CAPM which assumes a beta equal to 1.0 (given a 25 percent weight). Using his testimony parameters, the ECAPM produces a return of 9.6 percent. Again, this is well below my recommendation in this case. It is notable that the ECAPM will almost always produce a cost of equity result for utilities higher than the conventional CAPM. This is because utilities are low in risk compared to the overall stock market and therefore have betas below 1.0.

Q. HAS THE ECAPM RECEIVED REGULATORY SUPPORT?

A. Not to my knowledge. While Dr. Morin has been using this model for many years in utility rate cases, it has not received significant regulatory acceptance.

Q. IS THERE EVIDENCE SUPPORTING THE NEED FOR THE ECAPM CORRECTION?

A. I do not believe there is for utilities. In response to RCR-ROR-19, Dr. Morin cites research literature that he believes supports the use of the ECAPM, but that research is not specifically focused on utilities. This is important because utilities have risk attributes that make them different from unregulated firms, and this is well understood by investors. Hence studies based on data mostly from unregulated companies would not necessarily be applicable to utilities.

D. <u>Risk Premium Study</u>

Q. HOW DID MR. MORIN CONDUCT HIS RISK PREMIUM STUDY?

A. As explained in his testimony, he calculated the long-term average annual market return on the S&P Utility Index minus the long-term average annual return on Treasury bonds for the same time period. He produced a utility equity risk premium of 6.1 percent. He added this premium to the then current long-term Treasury yield of 3.5 percent, obtaining 9.6 percent (which he erroneous reports as 9.3 percent). He then proceeds to reject that result as "unreliable" due to unusual conditions in financial markets.

Next, he performs essentially the same analysis but this time comparing the S&P Utility Index to utility bond returns. This produces a risk premium of 5.0 percent. When added to a utility bond yields (as of the time of his testimony) of 6.0 percent, this produced a cost of equity of 11.0 percent (before this 0.3 percent flotation adder).

Q. IS THIS STUDY A RELIABLE ESTIMATES OF ETG'S COST OF EQUITY?

A. No, there are several weaknesses. First, the specific results he obtains tend to be sensitive to the time period selected. Dr. Morin claims that the average annual risk premium for 1932 to 2007 (about 75 years) for the S&P Utility Index relative to bond returns is 5.0 percentage points.[5] However, using the data from the most recent quarter century (i.e., 1983 to 2007), the equity risk premium is cut in half to a mere 2.7 percent, on average.[6] Using this methodology, this would strongly suggest that in recent decades the equity risk premium for utility stocks has declined significantly as compared to the much earlier 1932-1982 time period. Risk premia calculations from the past 25 years simply cannot support a 2009 cost of equity calculation anywhere close to his 11.0 percent result.

A second and perhaps more serious problem is that this risk premium study has little to do with ETG. The stock index that Dr. Morin uses consists almost entirely of electric companies, with almost no companies that are primarily gas distribution utilities.[7] In addition, the index that he used includes some of the largest names in unregulated merchant generation: AES Corp., Allegheny Energy, Constellation, Entergy Corp.) Exelon, FirstEnergy, Public Service Enterprise Group, PPL Corp. and others. The business operations and risk profiles of such companies are vastly different from stable, low-risk gas utility like ETG. Hence, the 11.0 percent cost of equity estimate for this group – even if deemed reliable – is not applicable in this case to ETG.

[5] Dr. Morin provided an update to his study in response to RCR-COC-37. This update produced a reduction in his long-run calculated risk premium from 5.0 to 4.5 percent.
[6] Calculated from year-by-year data in column (7) of his Exhibit RAM-3. When updating to include 2008 data, the 25-year average (i.e., 1983 to 2008) risk premium declines to about 1 percent.
[7] Among the 32 companies in that index, Nicor appears to be the sole gas distribution utility. (Source: Response to RCR-COC-27)

E. Return on Equity Adders

Q. WHAT RATE OF RETURN ADDERS ARE AT ISSUE IN DR. MORIN'S TESTIMONY?

A. Dr. Morin proposes to include a 0.2 to 0.3 percent adder to his results to reflect (alleged) flotation costs. This is the only "adder" over and above the cost of equity included in his proxy group cost of equity results. However, he warns that if Company proposals for revenue decoupling and the hypothetical capital structure are not adopted by the Board, further adders would be considered. In that case, he would include 25 basis points if the revenue decoupling is not accepted and about 40 basis points if the actual capital structure (which I calculate to include a 46 percent equity ratio) is used in place of the hypothetical capital structure in this case.

Q. DOES DR. MORIN IDENTIFY ANY FLOTATION EXPENSES THAT HAVE BEEN OR WILL BE INCURRED BY EITHER ETG OR ITS PARENT?

A. No, he does not, and none were identified in responses to data requests as I discussed earlier. Such costs may have been incurred by (or for) ETG at some time in the distant past, but no documentation has been presented. It is not proper to increase customer rates for costs that cannot be identified or documented by the utility in its rate case.

Q. DR. MORIN ANALOGIZES STOCK FLOTATION COSTS TO DEBT ISSUANCE COSTS WHICH NORMALLY ARE RECOVERED IN RATE OF RETURN AS AN ADDER TO THE COST OF DEBT. DOES THIS SUPPORT HIS POSITION?

A. No, it contradicts his position. It is true that the Company includes issuance expenses as part of its cost of debt, amortizing those expenses over the life of the bonds.

However, they can do so because the utility is able to provide and document the *actual* issuance expenses incurred with each debt issue. Moreover, they reflect those expenses as part of the cost of debt in accordance with accepted accounting and ratemaking treatment. Absent approved accounting and documentation of actual costs incurred, ETG could *not* include those debt issuance costs in rates. Dr. Morin proposes a "generic" adder to rate of return of 0.3 percent with no cost documentation, only his theory. It is simply not proper to include an increase to the authorized return and therefore customer rates to compensate for the utility costs that cannot be documented, i.e., costs that may or may not have been incurred at some unspecified time in the past.

Q. HOW DOES DR. MORIN CALCULATE HIS 25 BASIS PONT ADDER FOR THE ABSENCE OF REVENUE DECOUPLING?

A. The quantification is not explained in testimony. Instead, he merely asserts that his proxy companies have been authorized to implement revenue decoupling and/or pipe replacement rider mechanisms. RCR-COC-25 asked Dr. Morin for the basis for his assertion, and the response provides some information relating to this issue. The response indicated a lack of uniformity among state commissions on revenue decoupling and related rate mechanisms for his proxy gas companies. Practices differ greatly by regulatory jurisdiction, with some companies being granted such rate mechanisms but other companies not employing such mechanisms. His statement at page 75 of his testimony that "most, if not all, of the gas companies" in his group possesses revenue decoupling appears to be overstated. Moreover, he provides almost no information for his proxy electric companies.

Q. IF REVENUE DECOUPLING IS NOT IMPLEMENTED, SHOULD THE RETURN ON EQUITY BE INCREASED, AS DR. MORIN PROPOSES?

A. No, because his adjustment misses the point. The proper issue to consider in setting the cost of equity is whether ETG is a riskier company than the proxy group average in an overall sense, given current regulatory practices. Revenue decoupling undoubtedly does reduce a utility's risk, and it is one aspect of that utility's overall regulatory risk. However, as I demonstrated in Section III.C of my testimony, the financial community already views ETG's regulatory risk very favorably even without decoupling. There is simply no evidence – and Dr. Morin presents none – indicating that in an overall sense ETG is a riskier than the average proxy gas company. Hence, any adder for risk to the gas proxy group DCF or CAPM cost of equity would be unsupported.

Q. IS THERE ANY REASON FOR BELIEVING ETG IS LESS RISKY THAN AVERAGE?

A. Yes. The gas proxy companies, as a whole, have some non-regulated business activities that without question are riskier than the gas utility business. The non-utility risks for these companies are automatically captured in the DCF and CAPM studies. All else equal, this fact would argue for a return on equity below the DCF/CAPM cost of equity estimate. However, I believe this risk adder effect is not large, and it would be difficult to quantify. I therefore do not propose a risk adjustment.

Q. IF THE HYPOTHETICAL CAPITAL STRUCTURE IS REJECTED, IS THERE A NEED TO INCREASE THE RETURN ON EQUITY, AS DR. MORIN SUGGESTS?

A. No. As I have shown the ETG/AGLR actual capital structure does not differ significantly from the gas company proxy group average when short-term debt and current maturities are properly reflected. In addition, companies are evaluated by

investors based on their *actual* capital structures, not on the basis of a hypothetical capital structure. The evidence shows that ETG/AGLR are viewed as high quality and low-risk companies based on the actual capital structure. Again, unless Dr. Morin can demonstrate that ETG has greater overall investment risk that the proxy group, a rate of return adder for capital structure would be improper. He has provided no such demonstration.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

BEFORE THE STATE OF NEW JERSEY
OFFICE OF ADMINISTRATIVE LAW
BOARD OF PUBLIC UTILITIES

I/M/O THE PETITION OF	**)**	
PIVOTAL UTILITY HOLDINGS, INC.	**)**	
d/b/a/ ELIZABETHTOWN GAS FOR	**)**	**BPU DKT. NO. GR09030195**
APPROVAL OF INCREASED BASE	**)**	**OAL DKT. NO. PUC-03655-2009N**
TARIFF RATES FOR GAS SERVICE	**)**	
AND OTHER TARIFF REVISIONS	**)**	

SCHEDULES
ACCOMPANYING THE
TESTIMONY OF MATTHEW I. KAHAL

ON BEHALF OF THE

NEW JERSEY DEPARTMENT OF THE PUBLIC ADVOCATE
DIVISION OF RATE COUNSEL

RONALD K. CHEN
PUBLIC ADVOCATE OF NEW JERSEY

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NEWARK, NEW JERSEY 07101

Filed: AUGUST 21, 2009

ELIZABETHTOWN GAS

Projected Rate of Return Summary at
December 31, 2009

Capital Type	Balance[1] (Thousands $)	% of Total	Cost Rate	Weighted Cost
Long-Term Debt	$1,896,116	45.91%	6.02%[2]	2.76%
Preferred Stock	0	0.00	0.00	0.00
Short-Term Debt	329,243	7.97	1.20[3]	0.10
Common Equity	1,904,550	46.12	10.10[4]	4.66
Total	$4,129,909	100.00%	--	7.52%

[1] Source: 6 + 6 Exhibit MJM-12.6-A, Workpaper Supporting Exhibit MJM-6.

[2] Company estimate, but reducing the cost rate on the planned $250 million debt issuance from 8.0 to 7.0 percent.

[3] Estimate of current and going forward short-term debt cost rate. See page 2 of this Schedule.

[4] Source: Schedule MIK-4 and testimony.

ELIZABETHTOWN GAS

Short-Term Debt Balances and Cost Rates
For AGL Resources
April 2008 – March 2009
(Thousands $)

	Balance	Interest Rate
April 2008	$259,345	3.86%
May	278,217	3.27
June	355,820	2.67
July	466,129	3.60
August	588,945	3.15
September	650,339	2.84
October	750,176	3.77
November	835,160	4.32
December	884,085	2.55
January 2009	806,588	1.01
February	631,261	1.33
March	474,856	1.18
Average	$581,743	2.80%

Source: Response to RCR-COC-7.

ELIZABETHTOWN GAS

U.S. Historic Trends in Capital Costs

	Annualized Inflation (CPI)	10-Year Treasury Yield	3-Month Treasury Yield	Single A Utility Yield
1992	3.0%	7.0%	3.5%	8.7%
1993	3.0	5.9	3.0	7.6
1994	2.6	7.1	4.3	8.3
1995	2.8	6.6	5.5	7.9
1996	3.0	6.4	5.0	7.8
1997	2.3	6.4	5.1	7.6
1998	1.6	5.3	4.8	7.0
1999	2.2	5.7	4.7	7.6
2000	3.4	6.0	5.9	8.2
2001	2.9	5.0	3.5	7.8
2002	1.6	4.6	1.6	7.4
2003	1.9	4.1	1.0	6.6
2004	2.7	4.3	1.4	6.2
2005	3.4	4.3	3.0	5.6
2006	2.5	4.8	4.8	6.1
2007	2.8	4.6	4.5	6.3
2008	3.8	3.4	1.6	6.5

ELIZABETHTOWN GAS

U.S. Historic Trends in Capital Costs
(Continued)

	Annualized Inflation (CPI)	10-Year Treasury Yield	3-Month Treasury Yield	Single A Utility Yield
2002				
January	1.1%	5.0%	1.7%	7.7%
February	1.1	4.9	1.7	7.5
March	1.5	5.3	1.8	7.8
April	1.6	5.2	1.7	7.6
May	1.2	5.2	1.7	7.5
June	1.1	4.9	1.7	7.4
July	1.5	4.7	1.7	7.3
August	1.8	4.3	1.6	7.2
September	1.5	3.9	1.6	7.1
October	2.0	3.9	1.6	7.2
November	2.2	4.1	1.3	7.1
December	2.4	4.0	1.2	7.1
2003				
January	2.6%	4.1%	1.2%	7.1%
February	3.0	3.9	1.2	6.9
March	3.0	3.8	1.1	6.8
April	2.1	4.0	1.1	6.6
May	2.1	3.6	1.1	6.4
June	2.1	3.7	0.9	6.2
July	2.1	4.0	0.9	6.6
August	2.2	4.5	1.0	6.8
September	2.3	4.3	1.0	6.6
October	2.0	4.3	0.9	6.4
November	1.8	4.3	1.0	6.4
December	1.8	4.3	0.9	6.3
2004				
January	1.9%	4.2%	0.9%	6.2%
February	1.7	4.1	0.9	6.2
March	1.7	3.8	0.9	6.0
April	2.3	4.4	0.9	6.4
May	3.1	4.7	1.0	6.6
June	3.3	4.7	1.3	6.5
July	3.0	4.5	1.4	6.3
August	2.7	4.3	1.5	6.1
September	2.5	4.1	1.6	6.0
October	3.2	4.1	1.8	5.9
November	3.5	4.2	2.1	6.0
December	3.3	4.2	2.2	5.9

ELIZABETHTOWN GAS

U.S. Historic Trends in Capital Costs
(Continued)

	Annualized Inflation (CPI)	10-Year Treasury Yield	3-Month Treasury Yield	Single A Utility Yield
2005				
January	3.0%	4.2%	2.4%	5.8%
February	3.0	4.2	2.6	5.6
March	3.1	4.5	2.8	5.8
April	3.5	4.3	2.8	5.6
May	2.8	4.1	2.9	5.5
June	2.5	4.0	3.0	5.4
July	3.2	4.2	3.3	5.5
August	3.6	4.3	3.5	5.5
September.	4.7	4.2	3.5	5.5
October	4.3	4.5	3.8	5.8
November	3.5	4.5	4.0	5.9
December	3.4	4.5	4.0	5.8
2006				
January	4.0%	4.4%	4.3%	5.8%
February	3.6	4.6	4.5	5.8
March	3.4	4.7	4.6	6.0
April	3.5	5.0	4.7	6.3
May	4.2	5.1	4.8	6.4
June	4.3	5.1	4.9	6.4
July	4.1	5.1	5.1	6.4
August	3.8	4.9	5.1	6.2
September	2.1	4.7	4.9	6.0
October	3.5	4.7	5.1	6.0
November	2.5	4.6	5.1	5.8
December	2.5	4.6	5.0	5.8

ELIZABETHTOWN GAS

U.S. Historic Trends in Capital Costs
(Continued)

	Annualized Inflation (CPI)	10-Year Treasury Yield	3-Month Treasury Yield	Single A Utility Yield
2007				
January	2.1%	4.8%	5.1%	6.0%
February	2.4	4.7	5.2	5.9
March	2.8	4.6	5.1	5.9
April	2.6	4.7	5.0	6.0
May	2.7	4.8	5.0	6.0
June	2.7	5.1	5.0	6.3
July	2.4	5.0	5.0	6.3
August	2.0	4.7	4.3	6.2
September	2.8	4.5	4.0	6.2
October	3.5	4.5	4.0	6.1
November	4.3	4.2	3.4	6.0
December	4.1	4.1	3.1	6.2
2008				
January	4.3%	3.7%	2.8%	6.0%
February	4.0	3.7	2.2	6.2
March	4.0	3.5	1.3	6.2
April	3.9	3.7	1.3	6.3
May	4.2	3.9	1.8	6.3
June	5.0	4.1	1.9	6.4
July	5.6	4.0	1.7	6.4
August	5.4	3.9	1.8	6.4
September	4.9	3.7	1.2	6.5
October	3.7	3.8	0.7	7.6
November	1.1	3.5	0.2	7.6
December	0.1	2.4	0.0	6.5
2009				
January	0.0%	2.5%	0.1%	6.4%
February	0.2	2.9	0.3	6.3
March	(0.4)	2.8	0.2	6.4
April	(0.7)	2.9	0.2	6.5
May	(1.3)	2.9	0.2	6.5
June	(1.4)	3.7	0.2	6.2

Sources: *Economic Report of the President, Mergent's Bond Record, Federal Reserve Statistical Release, Consumer Price Index Summary*

ELIZABETHTOWN GAS

Listing of the Gas Utility Proxy Companies

	Company	Safety Rating	Financial Strength	Beta	2008 Common Equity Ratio*
1.	AGL Resources	2	B++	0.75	49.7%
2.	Atmos Energy	2	B+	0.65	49.2
3.	LaClede Group	2	B+	0.60	55.5
4.	Nicor, Inc.	3	A	0.75	68.4
5.	NW Natural Gas	1	A	0.60	55.1
6.	Piedmont Natural	2	B++	0.65	52.8
7.	South Jersey Ind.	2	B++	0.65	60.8
8.	Southwest Gas	3	B	0.75	44.7
9.	WGL Corp.	1	A	0.65	62.4
	Average	**1.9**	**--**	**0.67**	**55.4%**

* The common equity ratio excludes short-term debt (and current maturities of long-term debt).

Source: *Value Line Investment Survey*, June 12, 2009

ELIZABETHTOWN GAS

DCF Summary for
Gas Distribution Proxy Group

1. Dividend yield (January – June 2009)	4.64%[1]
2. Adjusted yield ((1) x 1.0275)	4.8%
3. Long-term Growth Rate	5.0 - 5.5[2]
4. Total Return ((2) + (3))	9.8 - 10.3%
5. Flotation Adjustment	0.00%
6. Cost of equity ((4) + (5))	9.8 - 10.3%
7. Midpoint	10.05%
Recommendation	**10.1%**

[1] Schedule MIK-4, page 2 of 4.

[2] Schedule MIK-4, pages 3 of 4 and 4 of 4.

ELIZABETHTOWN GAS

Dividend Yields for Gas Distribution Proxy Group
(January – June 2009)

	Company	January	February	March	April	May	June	Average
1.	AGL Resources	5.4%	6.2%	6.5%	5.5%	5.9%	5.4%	5.82%
2.	Atmos	5.4	6.0	5.7	5.3	5.5	5.3	5.53
3.	LaClede	3.4	3.9	4.0	4.4	5.0	4.6	4.22
4.	NICOR	5.4	5.9	5.6	5.8	5.9	5.4	5.67
5.	Northwest Nat.	3.7	3.9	3.6	3.9	3.7	3.6	3.73
6.	Piedmont	4.0	4.3	4.2	4.4	4.8	4.5	4.37
7.	South Jersey	3.2	3.3	3.4	3.4	3.6	3.4	3.38
8.	Southwest Gas	3.5	4.9	4.5	4.7	4.6	4.3	4.42
9.	WGL	4.4	4.7	4.5	4.7	4.9	4.6	4.63
	Average	**4.27%**	**4.79%**	**4.67%**	**4.68%**	**4.90%**	**4.58%**	**4.64%**

Source: S&P *Stock Guide*, February – July 2009.

ELIZABETHTOWN GAS

Projection of Earnings Per Share
Five-Year Growth Rates for the
Gas Distribution Proxy Group

	Company	Value Line	First Call	Zacks	CNN	Average
1.	AGL Resources	3.5%	4.25%	5.3%	5%	4.51%
2.	Atmos	4.0	5.0	5.8	5	4.95
3.	LaClede	3.5	3.5	6.5	3	4.13
4.	NICOR	0.5	4.3	5.9	4	3.67
5.	Northwest	5.0	4.75	6.8	6	5.63
6.	Piedmont	6.0	7.0	6.5	8	6.88
7.	South Jersey	5.5	7.0	8.4	8	7.23
8.	Southwest	5.0	6.0	6.0	6	5.75
9.	WGL	4.0	4.0	6.7	5	4.93
	Average	**4.11%**	**5.08%**	**6.40%**	**5.56%**	**5.30%**

Sources: *Value Line Investment Survey*, June 12, 2009. First Call is from Yahoo Finance website (May 2009) and Zacks is from MSN Money website (May 2009). In addition, the CNN figures are from the CNNfn web site (May 2009).

ELIZABETHTOWN GAS

Other Value Line Measure of
Growth for the Gas Distribution Proxy Group

	Company	Dividend Per Share	Book Value Per Share	Earnings Retention
1.	AGL Resources	2.5%	1.5%	6.0%
2.	Atmos	1.5	4.0	4.0
3.	LaClede	2.5	5.5	5.0
4.	NICOR	0.0	4.5	4.0
5.	Northwest	5.5	5.0	4.5
6.	Piedmont	3.5	4.0	5.0
7.	South Jersey	7.0	6.0	6.5
8.	Southwest	5.0	3.5	4.0
9.	WGL	2.5	5.0	4.5
	Average	**3.33%**	**4.33%**	**4.83%**

Source: *Value Line Investment Survey*, June 12, 2009. The earnings retention figures are projections for 2012-2014.

ELIZABETHTOWN GAS

Capital Asset Pricing Model Study
Illustrative Calculations

A. Model Specification

$K_e = R_F + \beta (R_m - R_F)$, where

K_e = cost of equity

R_F = return on risk free asset

Rm = expected stock market return

B. Data Inputs

R_F = 4.0% (Treasury bond yields for the most recent six months, see page 2 of 3)

Rm = 9-12% (equates to equity risk premium of 5.0 - 8.0%)

Beta = 0.67 (Source: page 3 of this schedule)

C. Model Calculations

Low end: $K_e = 4.0\% + 0.67\ (5.0) = 7.35\%$

Midpoint: $K_e = 4.0\% + 0.67\ (6.5) = 8.36\%$

Upper End: $K_e = 4.0\% + 0.67\ (8.0) = 9.36\%$

ELIZABETHTOWN GAS

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Long-Term Treasury Yields
(January – June 2009)

	10-Year	20-Year	30-Year
January 2009	2.5%	3.5%	3.1%
February	2.9	3.8	3.6
March	2.8	3.8	3.6
April	2.9	3.8	3.8
May	3.3	4.2	4.2
June	3.7	4.5	4.5
Average	**3.0%**	**3.9%**	**3.8%**

Source: Federal Reserve *Statistical Release* (H.15), various issues.

ELIZABETHTOWN GAS

Beta Statistics for Gas Proxy Companies

Company	Value Line	Yahoo Finance	MSN Money	Average
1. AGL Resources	0.75	0.45	0.41	0.54
2. Atmos	0.60	0.51	0.51	0.54
3. LaClede	0.65	-0.05	0.05	0.22
4. NICOR	0.75	0.33	0.34	0.47
5. Northwest Natural	0.60	0.25	0.30	0.38
6. Piedmont	0.65	0.19	0.21	0.35
7. South Jersey	0.65	0.23	0.23	0.37
8. Southwest Gas	0.70	0.69	0.68	0.69
9. WGL	0.65	0.19	0.23	0.36
Average	**0.67**	**0.31**	**0.36**	**0.46**

Sources: See sources listed on page 3 of Schedule MIK-4.

APPENDIX A

STATEMENT OF QUALIFICATIONS

MATTHEW I. KAHAL

Mr. Kahal is currently an independent consulting economist, specializing in energy economics, public utility regulation and financial analysis. Over the past two decades, his work has encompassed electric utility integrated resource planning (IRP), power plant licensing and a wide range of utility financial issues. In the financial area he has conducted numerous cost of capital studies and addressed other financial issues for electric, gas, telephone and water utilities. Mr. Kahal's work in recent years has shifted to electric utility restructuring, mergers and competition.

Mr. Kahal has provided expert testimony on more than 300 occasions before state and federal regulatory commissions and the U.S. Congress. His testimony has covered need for power, integrated resource planning, cost of capital, purchased power practices and contracts, merger economics, industry restructuring and various other regulatory policy issues.

Education:

B.A. (Economics) - University of Maryland, 1971.

M.A. (Economics) - University of Maryland, 1974.

Ph.D. candidate - University of Maryland, completed all course work and qualifying examinations.

Previous Employment:

1981-2001 - Exeter Associates, Inc. (founding Principal).

1980-1981 - Member of the Economic Evaluation Directorate, The Aerospace Corporation, Washington, D.C. office.

1977-1980 - Economist, Washington, D.C. consulting firm.

1972-1977 - Research/Teaching Assistant and Instructor, Department of Economics, University of Maryland (College Park).

1975-1977 - Lecturer in Business/Economics, Montgomery College.

Professional Work Experience:

Mr. Kahal has more than twenty years experience managing and conducting consulting assignments relating to public utility economics and regulation. In 1981, he and five colleagues

founded the firm of Exeter Associates, Inc. and for the next 20 years he served as a Principal and corporate officer in the firm. During that time, he supervised multi-million dollar support contracts with the State of Maryland and directed the technical work conducted both by Exeter professional staff and numerous subcontractors. Additionally, Mr. Kahal took the lead role at Exeter in consulting to the firm's other governmental and private clients in the areas of financial analysis, utility mergers, electric restructuring and utility purchase power contracts.

At the Aerospace Corporation, Mr. Kahal served as an economic consultant to the Strategic Petroleum Reserve (SPR). In that capacity he participated in a detailed financial assessment of the SPR, and developed an econometric forecasting model of U.S. petroleum industry inventories. That study has been used to determine the extent to which private sector petroleum stocks can be expected to protect the U.S. from the impacts of oil import interruptions.

Before entering consulting, Mr. Kahal held faculty positions with the Department of Economics at the University of Maryland and with Montgomery College teaching courses on economic principles, business and economic development.

Publications and Consulting Reports:

Projected Electric Power Demands of the Baltimore Gas and Electric Company, Maryland Power Plant Siting Program, 1979.

Projected Electric Power Demands of the Allegheny Power System, Maryland Power Plant Siting Program, January 1980.

An Econometric Forecast of Electric Energy and Peak Demand on the Delmarva Peninsula, Maryland Power Plant Siting Program, March 1980 (with Ralph E. Miller).

A Benefit/Cost Methodology of the Marginal Cost Pricing of Tennessee Valley Authority Electricity, prepared for the Board of Directors of the Tennessee Valley Authority, April 1980.

An Evaluation of the Delmarva Power and Light Company Generating Capacity Profile and Expansion Plan, (Interim Report), prepared for the Delaware Office of the Public Advocate, July 1980, (with Sharon L. Mason).

Rhode Island-DOE Electric Utilities Demonstration Project, Third Interim Report on Preliminary Analysis of the Experimental Results, prepared for the Economic Regulatory Administration, U.S. Department of Energy, July 1980.

Petroleum Inventories and the Strategic Petroleum Reserve, The Aerospace Corporation, prepared for the Strategic Petroleum Reserve Office, U.S. Department of Energy, December 1980.

Alternatives to Central Station Coal and Nuclear Power Generation, prepared for Argonne National Laboratory and the Office of Utility Systems, U.S. Department of Energy, August 1981.

"An Econometric Methodology for Forecasting Power Demands," Conducting Need-for-Power Review for Nuclear Power Plants (D.A. Nash, ed.), U.S. Nuclear Regulatory Commission, NUREG-0942, December 1982.

State Regulatory Attitudes Toward Fuel Expense Issues, prepared for the Electric Power Research Institute, July 1983, (with Dale E. Swan).

"Problems in the Use of Econometric Methods in Load Forecasting," Adjusting to Regulatory, Pricing and Marketing Realities (Harry Trebing, ed.), Institute of Public Utilities, Michigan State University, 1983.

Proceedings of the Maryland Conference on Electric Load Forecasting, (editor and contributing author), Maryland Power Plant Siting Program, PPES-83-4, October 1983.

"The Impacts of Utility-Sponsored Weatherization Programs: The Case of Maryland Utilities," (with others), in Government and Energy Policy (Richard L. Itteilag, ed.), 1983.

Power Plant Cumulative Environmental Impact Report, contributing author, (Paul E. Miller, ed.) Maryland Department of Natural Resources, January 1984.

Projected Electric Power Demands for the Potomac Electric Power Company, three volumes with Steven L. Estomin), prepared for the Maryland Power Plant Siting Program, March 1984.

"An Assessment of the State-of-the-Art of Gas Utility Load Forecasting," (with Thomas Bacon, Jr. and Steven L. Estomin), published in the Proceedings of the Fourth NARUC Biennial Regulatory Information Conference, 1984.

"Nuclear Power and Investor Perceptions of Risk," (with Ralph E. Miller), published in The Energy Industries in Transition: 1985-2000 (John P. Weyant and Dorothy Sheffield, eds.), 1984.

The Financial Impact of Potential Department of Energy Rate Recommendations on the Commonwealth Edison Company, prepared for the U.S. Department of Energy, October 1984.

"Discussion Comments," published in Impact of Deregulation and Market Forces on Public Utilities: The Future of Regulation (Harry Trebing, ed.), Institute of Public Utilities, Michigan State University, 1985.

An Econometric Forecast of the Electric Power Loads of Baltimore Gas and Electric Company, two volumes (with others), prepared for the Maryland Power Plant Siting Program, 1985.

A Survey and Evaluation of Demand Forecast Methods in the Gas Utility Industry, prepared for the Public Utilities Commission of Ohio, Forecasting Division, November 1985, (with Terence Manuel).

A Review and Evaluation of the Load Forecasts of Houston Lighting & Power Company and Central Power & Light Company -- Past and Present, prepared for the Texas Public Utility Commission, December 1985, (with Marvin H. Kahn).

Power Plant Cumulative Environmental Impact Report for Maryland, principal author of three of the eight chapters in the report (Paul E. Miller, ed.), PPSP-CEIR-5, March 1986.

"Potential Emissions Reduction from Conservation, Load Management, and Alternative Power," published in Acid Deposition in Maryland: A Report to the Governor and General Assembly, Maryland Power Plant Research Program, AD-87-1, January 1987.

Determination of Retrofit Costs at the Oyster Creek Nuclear Generating Station, March 1988, prepared for Versar, Inc., New Jersey Department of Environmental Protection.

Excess Deferred Taxes and the Telephone Utility Industry, April 1988, prepared on behalf of the National Association of State Utility Consumer Advocates.

Toward a Proposed Federal Policy for Independent Power Producers, comments prepared on behalf of the Indiana Consumer Counselor, FERC Docket EL87-67-000, November 1987.

Review and Discussion of Regulations Governing Bidding Programs, prepared for the Pennsylvania Office of Consumer Advocate, June 1988.

A Review of the Proposed Revisions to the FERC Administrative Rules on Avoided Costs and Related Issues, prepared for the Pennsylvania Office of Consumer Advocate, April 1988.

Review and Comments on the FERC NOPR Concerning Independent Power Producers, prepared for the Pennsylvania Office of Consumer Advocate, June 1988.

The Costs to Maryland Utilities and Ratepayers of an Acid Rain Control Strategy -- An Updated Analysis, prepared for the Maryland Power Plant Research Program, October 1987, AD-88-4.

"Comments," in New Regulatory and Management Strategies in a Changing Market Environment (Harry M. Trebing and Patrick C. Mann, editors), Proceedings of the Institute of Public Utilities Eighteenth Annual Conference, 1987.

Electric Power Resource Planning for the Potomac Electric Power Company, prepared for the Maryland Power Plant Research Program, July 1988.

Power Plant Cumulative Environmental Impact Report for Maryland (Thomas E. Magette, ed.) authored two chapters, November 1988, PPRP-CEIR-6.

Resource Planning and Competitive Bidding for Delmarva Power & Light Company, October 1990, prepared for the Maryland Department of Natural Resources (with M. Fullenbaum).

Electric Power Rate Increases and the Cleveland Area Economy, prepared for the Northeast Ohio Areawide Coordinating Agency, October 1988.

An Economic and Need for Power Evaluation of Baltimore Gas & Electric Company's Perryman Plant, May 1991, prepared for the Maryland Department of Natural Resources (with M. Fullenbaum).

The Cost of Equity Capital for the Bell Local Exchange Companies in a New Era of Regulation, October 1991, presented at the Atlantic Economic Society 32nd Conference, Washington, D.C.

A Need for Power Review of Delmarva Power & Light Company's Dorchester Unit 1 Power Plant, March 1993, prepared for the Maryland Department of National Resources (with M. Fullenbaum)

The AES Warrior Run Project: Impact on Western Maryland Economic Activity and Electric Rates, February 1993, prepared for the Maryland Power Plant Research Program (with Peter Hall).

An Economic Perspective on Competition and the Electric Utility Industry, November 1994. Prepared for the Electric Consumers' Alliance.

PEPCO's Clean Air Act Compliance Plan: Status Report, prepared for the Maryland Power Plant Research Plan, January 1995 (w/Diane Mountain, Environmental Resources Management, Inc.).

The FERC Open Access Rulemaking: A Review of the Issues, prepared for the Indiana Office of Utility Consumer Counselor and the Pennsylvania Office of Consumer Advocate, June 1995.

A Status Report on Electric Utility Restructuring: Issues for Maryland, prepared for the Maryland Power Plant Research Program, November 1995 (with Daphne Psacharopoulos).

Modeling the Financial Impacts on the Bell Regional Holding Companies from Changes in Access Rates, prepared for MCI Corporation, May 1996.

The CSEF Electric Deregulation Study: Economic Miracle or the Economists' Cold Fusion?, prepared for the Electric Consumers' Alliance, Indianapolis, Indiana, October 1996.

Reducing Rates for Interstate Access Service: Financial Impacts on the Bell Regional Holding Companies, prepared for MCI Corporation, May 1997.

The New Hampshire Retail Competition Pilot Program: A Preliminary Evaluation, July 1997, prepared for the Electric Consumers' Alliance (with Jerome D. Mierzwa).

Electric Restructuring and the Environment: Issue Identification for Maryland, March 1997, prepared for the Maryland Power Plant Research Program (with Environmental Resource Management, Inc.)

An Analysis of Electric Utility Embedded Power Supply Costs, prepared for Power-Gen International Conference, Dallas, Texas, December 1997.

Market Power Outlook for Generation Supply in Louisiana, December 2000, prepared for the Louisiana Public Service Commission (with others).

A Review of Issues Concerning Electric Power Capacity Markets, prepared for the Maryland Power Plant Research Program, December 2001 (with B. Hobbs and J. Inon).
The Economic Feasibility of Air Emissions Controls at the Brandon Shores and Morgantown Coal-fired Power Plants, February 2005, (prepared for the Chesapeake Bay Foundation).

The Economic Feasibility of Power Plant Retirements on the Entergy System, September 2005 with Phil Hayet (prepared for the Louisiana Public Service Commission).

Expert Report on Capital Structure, Equity and Debt Costs, prepared for the Edmonton Regional Water Customers Group, August 30, 2006.

Maryland's Options to Reduce and Stabilize Electric Power Prices Following Restructuring, with Steven L. Estomin, prepared for the Power Plant Research Program, Maryland Department of Natural Resources, September 2006.

Expert Report of Matthew I. Kahal, on behalf of the U. S. Department of Justice, August 2008, Civil Action No. IP-99-1693C-MIS.

Conference and Workshop Presentations:

Workshop on State Load Forecasting Programs, sponsored by the Nuclear Regulatory Commission and Oak Ridge National Laboratory, February 1982 (presentation on forecasting methodology).

Fourteenth Annual Conference of the Michigan State University Institute for Public Utilities, December 1982 (presentation on problems in forecasting).

Conference on Conservation and Load Management, sponsored by the Massachusetts Energy Facilities Siting Council, May 1983 (presentation on cost-benefit criteria).

Maryland Conference on Load Forecasting, sponsored by the Maryland Power Plant Siting Program and the Maryland Public Service Commission, June 1983 (presentation on overforecasting power demands).

The 5th Annual Meetings of the International Association of Energy Economists, June 1983 (presentation on evaluating weatherization programs).

The NARUC Advanced Regulatory Studies Program (presented lectures on capacity planning for electric utilities), February 1984.

The 16th Annual Conference of the Institute of Public Utilities, Michigan State University (discussant on phase-in and excess capacity), December 1984.

U.S. Department of Energy Utilities Conference, Las Vegas, Nevada (presentation of current and future regulatory issues), May 1985.

The 18th Annual Conference of the Institute of Public Utilities, Michigan State University, Williamsburg, Virginia, December 1986 (discussant on cogeneration).

The NRECA Conference on Load Forecasting, sponsored by the National Rural Electric Cooperative Association, New Orleans, Louisiana, December 1987 (presentation on load forecast accuracy).

The Second Rutgers/New Jersey Department of Commerce Annual Conference on Energy Policy in the Middle Atlantic States, Rutgers University, April 1988 (presentation on spot pricing of electricity).

The NASUCA 1988 Mid-Year Meeting, Annapolis, Maryland, June 1988, sponsored by the National Association of State Utility Consumer Advocates (presentation on the FERC electricity avoided cost NOPRs).

The Thirty Second Atlantic Economic Society Conference, Washington, D.C., October 1991 (presentation of a paper on cost of capital issues for the Bell Operating Companies).

The NASUCA 1993 Mid-Year Meeting, St. Louis, Missouri, sponsored by the National Association of State Utility Consumer Advocates, June 1993 (presentation on regulatory issues concerning electric utility mergers).

The NASUCA and NARUC annual meetings in New York City, November 1993 (presentations and panel discussions on the emerging FERC policies on transmission pricing).

The NASUCA annual meetings in Reno, Nevada, November 1994 (presentation concerning the FERC NOPR on stranded cost recovery).

U.S. Department of Energy Utilities/Energy Management Workshop, March 1995 (presentation concerning electric utility competition).

The 1995 NASUCA Mid-Year Meeting, Breckenridge, Colorado, June 1995, (presentation concerning the FERC rulemaking on electric transmission open access).

The 1996 NASUCA Mid-Year Meeting, Chicago, Illinois, June 1996 (presentation concerning electric utility merger issues).

Conference on "Restructuring the Electric Industry," sponsored by the National Consumers League and Electric Consumers Alliance, Washington, D.C., May 1997 (presentation on retail access pilot programs).

The 1997 Mid-Atlantic Conference of Regulatory Utilities Commissioners (MARUC), Hot Springs, Virginia, July 1997 (presentation concerning electric deregulation issues).

Power-Gen '97 International Conference, Dallas, Texas, December 1997 (presentation concerning utility embedded costs of generation supply).

Consumer Summit on Electric Competition, sponsored by the National Consumers League and Electric Consumers' Alliance, Washington, D.C., March 2001 (presentation concerning generation supply and reliability).

National Association of State Utility Consumer Advocates, Mid-Year Meetings, Austin, Texas, June 16-17, 2002 (presenter and panelist on RTO/Standard Market Design issues).

Louisiana State Bar Association, Public Utility Section, October 2, 2002. (Presentation on Performance-Based Ratemaking and panelist on RTO issues). Baton Rouge, Louisiana.

Virginia State Corporation Commission/Virginia State Bar, Twenty Second National Regulatory Conference, May 10, 2004. (Presentation on Electric Transmission System Planning.) Williamsburg, Virginia.

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
1.	27374 & 27375 October 1978	Long Island Lighting Company	New York Counties	Nassau & Suffolk	Economic Impacts of Proposed Rate Increase
2.	6807 January 1978	Generic	Maryland	MD Power Plant Siting Program	Load Forecasting
3.	78-676-EL-AIR February 1978	Ohio Power Company	Ohio	Ohio Consumers' Counsel	Test Year Sales and Revenues
4.	17667 May 1979	Alabama Power Company	Alabama	Attorney General	Test Year Sales, Revenues, Costs and Load Forecasts
5.	None April 1980	Tennessee Valley Authority	TVA Board	League of Women Voters	Time-of-Use Pricing
6.	R-80021082	West Penn Power Company	Pennsylvania	Office of Consumer Advocate	Load Forecasting, Marginal Cost pricing
7.	7259 (Phase I) October 1980	Potomac Edison Company	Maryland	MD Power Plant Siting Program	Load Forecasting
8.	7222 December 1980	Delmarva Power & Light Company	Maryland	MD Power Plant Siting Program	Need for Plant, Load Forecasting
9.	7441 June 1981	Potomac Electric Power Company	Maryland	Commission Staff	PURPA Standards
10.	7159 May 1980	Baltimore Gas & Electric	Maryland	Commission Staff	Time-of-Use Pricing
11.	81-044-E-42T	Monongahela Power	West Virginia	Commission Staff	Time-of-Use Rates
12.	7259 (Phase II) November 1981	Potomac Edison Company	Maryland	MD Power Plant Siting Program	Load Forecasting, Load Management
13.	1606 September 1981	Blackstone Valley Electric and Narragansett	Rhode Island	Division of Public Utilities	PURPA Standards
14.	RID 1819 April 1982	Pennsylvania Bell	Pennsylvania	Office of Consumer Advocate	Rate of Return
15.	82-0152 July 1982	Illinois Power Company	Illinois	U.S. Department of Defense	Rate of Return, CWIP
16.	7559 September 1982	Potomac Edison Company	Maryland	Commission Staff	Cogeneration
17.	820150-EU September 1982	Gulf Power Company	Florida	Federal Executive Agencies	Rate of Return, CWIP

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
18.	82-057-15 January 1983	Mountain Fuel Supply Company	Utah	Federal Executive Agencies	Rate of Return, Capital Structure
19.	5200 August 1983	Texas Electric Service Company	Texas	Federal Executive Agencies	Cost of Equity
20.	28069 August 1983	Oklahoma Natural Gas	Oklahoma	Federal Executive Agencies	Rate of Return, deferred taxes, capital structure, attrition
21.	83-0537 February 1984	Commonwealth Edison Company	Illinois	U.S. Department of Energy	Rate of Return, capital structure, financial capability
22.	84-035-01 June 1984	Utah Power & Light Company	Utah	Federal Executive Agencies	Rate of Return
23.	U-1009-137 July 1984	Utah Power & Light Company	Idaho	U.S. Department of Energy	Rate of Return, financial condition
24.	R-842590 August 1984	Philadelphia Electric Company	Pennsylvania	Office of Consumer Advocate	Rate of Return
25.	840086-EI August 1984	Gulf Power Company	Florida	Federal Executive Agencies	Rate of Return, CWIP
26.	84-122-E August 1984	Carolina Power & Light Company	South Carolina	South Carolina Consumer Advocate	Rate of Return, CWIP, load forecasting
27.	CGC-83-G & CGC-84-G October 1984	Columbia Gas of Ohio	Ohio	Ohio Division of Energy	Load forecasting
28.	R-842621 October 1984	Western Pennsylvania Water Company	Pennsylvania	Office of Consumer Advocate	Test year sales
29.	R-842710 January 1985	ALLTEL Pennsylvania Inc.	Pennsylvania	Office of Consumer Advocate	Rate of Return
30.	ER-504 February 1985	Allegheny Generating Company	FERC	Office of Consumer Advocate	Rate of Return
31.	R-842632 March 1985	West Penn Power Company	Pennsylvania	Office of Consumer Advocate	Rate of Return, conservation, time-of-use rates
32.	83-0537 & 84-0555 April 1985	Commonwealth Edison Company	Illinois	U.S. Department of Energy	Rate of Return, incentive rates, rate base
33.	Rulemaking Docket No. 11, May 1985	Generic	Delaware	Delaware Commission Staff	Interest rates on refunds

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
34.	29450 July 1985	Oklahoma Gas & Electric Company	Oklahoma	Oklahoma Attorney General	Rate of Return, CWIP in rate base
35.	1811 August 1985	Bristol County Water Company	Rhode Island	Division of Public Utilities	Rate of Return, capital Structure
36.	R-850044 & R-850045 August 1985	Quaker State & Continental Telephone Companies	Pennsylvania	Office of Consumer Advocate	Rate of Return
37.	R-850174 November 1985	Philadelphia Suburban Water Company	Pennsylvania	Office of Consumer Advocate	Rate of Return, financial conditions
38.	U-1006-265 March 1986	Idaho Power Company	Idaho	U.S. Department of Energy	Power supply costs and models
39.	EL-86-37 & EL-86-38 September 1986	Allegheny Generating Company	FERC	PA Office of Consumer Advocate	Rate of Return
40.	R-850287 June 1986	National Fuel Gas Distribution Corp.	Pennsylvania	Office of Consumer Advocate	Rate of Return
41.	1849 August 1986	Blackstone Valley Electric	Rhode Island	Division of Public Utilities	Rate of Return, financial condition
42.	86-297-GA-AIR November 1986	East Ohio Gas Company	Ohio	Ohio Consumers' Counsel	Rate of Return
43.	U-16945 December 1986	Louisiana Power & Light Company	Louisiana	Public Service Commission	Rate of Return, rate phase-in plan
44.	Case No. 7972 February 1987	Potomac Electric Power Company	Maryland	Commission Staff	Generation capacity planning, purchased power contract
45.	EL-86-58 & EL-86-59 March 1987	System Energy Resources and Middle South Services	FERC	Louisiana PSC	Rate of Return
46.	ER-87-72-001 April 1987	Orange & Rockland	FERC	PA Office of Consumer Advocate	Rate of Return
47.	U-16945 April 1987	Louisiana Power & Light Company	Louisiana	Commission Staff	Revenue requirement update phase-in plan
48.	P-870196 May 1987	Pennsylvania Electric Company	Pennsylvania	Office of Consumer Advocate	Cogeneration contract
49.	86-2025-EL-AIR June 1987	Cleveland Electric Illuminating Company	Ohio	Ohio Consumers' Counsel	Rate of Return
50.	86-2026-EL-AIR June 1987	Toledo Edison Company	Ohio	Ohio Consumers' Counsel	Rate of Return

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
51.	87-4 June 1987	Delmarva Power & Light Company	Delaware	Commission Staff	Cogeneration/small power
52.	1872 July 1987	Newport Electric Company	Rhode Island	Commission Staff	Rate of Return
53.	WO 8606654 July 1987	Atlantic City Sewerage Company	New Jersey	Resorts International	Financial condition
54.	7510 August 1987	West Texas Utilities Company	Texas	Federal Executive Agencies	Rate of Return, phase-in
55.	8063 Phase I October 1987	Potomac Electric Power Company	Maryland	Power Plant Research Program	Economics of power plant site selection
56.	00439 November 1987	Oklahoma Gas & Electric Company	Oklahoma	Smith Cogeneration	Cogeneration economics
57.	RP-87-103 February 1988	Panhandle Eastern Pipe Line Company	FERC	Indiana Utility Consumer Counselor	Rate of Return
58.	EC-88-2-000 February 1988	Utah Power & Light Co. PacifiCorp	FERC	Nucor Steel	Merger economics
59.	87-0427 February 1988	Commonwealth Edison Company	Illinois	Federal Executive Agencies	Financial projections
60.	870840 February 1988	Philadelphia Suburban Water Company	Pennsylvania	Office of Consumer Advocate	Rate of Return
61.	870832 March 1988	Columbia Gas of Pennsylvania	Pennsylvania	Office of Consumer Advocate	Rate of Return
62.	8063 Phase II July 1988	Potomac Electric Power Company	Maryland	Power Plant Research Program	Power supply study
63.	8102 July 1988	Southern Maryland Electric Cooperative	Maryland	Power Plant Research Program	Power supply study
64.	10105 August 1988	South Central Bell Telephone Co.	Kentucky	Attorney General	Rate of Return, incentive regulation
65.	00345 August 1988	Oklahoma Gas & Electric Company	Oklahoma	Smith Cogeneration	Need for power
66.	U-17906 September 1988	Louisiana Power & Light Company	Louisiana	Commission Staff	Rate of Return, nuclear power costs Industrial contracts

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
67.	88-170-EL-AIR October 1988	Cleveland Electric Illuminating Co.	Ohio	Northeast-Ohio Areawide Coordinating Agency	Economic impact study
68.	1914 December 1988	Providence Gas Company	Rhode Island	Commission Staff	Rate of Return
69.	U-12636 & U-17649 February 1989	Louisiana Power & Light Company	Louisiana	Commission Staff	Disposition of litigation proceeds
70.	00345 February 1989	Oklahoma Gas & Electric Company	Oklahoma	Smith Cogeneration	Load forecasting
71.	RP88-209 March 1989	Natural Gas Pipeline of America	FERC	Indiana Utility Consumer Counselor	Rate of Return
72.	8425 March 1989	Houston Lighting & Power Company	Texas	U.S. Department of Energy	Rate of Return
73.	EL89-30-000 April 1989	Central Illinois Public Service Company	FERC	Soyland Power Coop, Inc.	Rate of Return
74.	R-891208 May 1989	Pennsylvania American Water Company	Pennsylvania	Office of Consumer Advocate	Rate of Return
75.	89-0033 May 1989	Illinois Bell Telephone Company	Illinois	Citizens Utility Board	Rate of Return
76.	881167-EI May 1989	Gulf Power Company	Florida	Federal Executive Agencies	Rate of Return
77.	R-891218 July 1989	National Fuel Gas Distribution Company	Pennsylvania	Office of Consumer Advocate	Sales forecasting
78.	8063, Phase III Sept. 1989	Potomac Electric Power Company	Maryland	Depart. Natural Resources	Emissions Controls
79.	37414-S2 October 1989	Public Service Company of Indiana	Indiana	Utility Consumer Counselor	Rate of Return, DSM, off-system sales, incentive regulation
80.	October 1989	Generic	U.S. House of Reps. Comm. on Ways & Means	NA	Excess deferred income tax
81.	38728 November 1989	Indiana Michigan Power Company	Indiana	Utility Consumer Counselor	Rate of Return
82.	RP89-49-000 December 1989	National Fuel Gas Supply Corporation	FERC	PA Office of Consumer Advocate	Rate of Return

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
83.	R-891364 December 1989	Philadelphia Electric Company	Pennsylvania	PA Office of Consumer Advocate	Financial impacts (surrebuttal only)
84.	RP89-160-000 January 1990	Trunkline Gas Company	FERC	Indiana Utility Consumer Counselor	Rate of Return
85.	EL90-16-000 November 1990	System Energy Resources, Inc.	FERC	Louisiana Public Service Commission	Rate of Return
86.	89-624 March 1990	Bell Atlantic	FCC	PA Office of Consumer Advocate	Rate of Return
87.	8245 March 1990	Potomac Edison Company	Maryland	Depart. Natural Resources	Avoided Cost
88.	000586 March 1990	Public Service Company of Oklahoma	Oklahoma	Smith Cogeneration Mgmt.	Need for Power
89.	38868 March 1990	Indianapolis Water Company	Indiana	Utility Consumer Counselor	Rate of Return
90.	1946 March 1990	Blackstone Valley Electric Company	Rhode Island	Division of Public Utilities	Rate of Return
91.	000776 April 1990	Oklahoma Gas & Electric Company	Oklahoma	Smith Cogeneration Mgmt.	Need for Power
92.	890366 May 1990, December 1990	Metropolitan Edison Company	Pennsylvania	Office of Consumer Advocate	Competitive Bidding Program Avoided Costs
93.	EC-90-10-000 May 1990	Northeast Utilities	FERC	Maine PUC, et. al.	Merger, Market Power, Transmission Access
94.	ER-891109125 July 1990	Jersey Central Power & Light	New Jersey	Rate Counsel	Rate of Return
95.	R-901670 July 1990	National Fuel Gas Distribution Corp.	Pennsylvania	Office of Consumer Advocate	Rate of Return Test year sales
96.	8201 October 1990	Delmarva Power & Light Company	Maryland	Depart. Natural Resources	Competitive Bidding, Resource Planning
97.	EL90-45-000 April 1991	Entergy Services, Inc.	FERC	Louisiana PSC	Rate of Return
98.	GR90080786J January 1991	New Jersey Natural Gas	New Jersey	Rate Counsel	Rate of Return

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99.	90-256 January 1991	South Central Bell Telephone Company	Kentucky	Attorney General	Rate of Return
100.	U-17949A February 1991	South Central Bell Telephone Company	Louisiana	Louisiana PSC	Rate of Return
101.	ER90091090J April 1991	Atlantic City Electric Company	New Jersey	Rate Counsel	Rate of Return
102.	8241, Phase I April 1991	Baltimore Gas & Electric Company	Maryland	Dept. of Natural Resources	Environmental controls
103.	8241, Phase II May 1991	Baltimore Gas & Electric Company	Maryland	Dept. of Natural Resources	Need for Power, Resource Planning
104.	39128 May 1991	Indianapolis Water Company	Indiana	Utility Consumer Counselor	Rate of Return, rate base, financial planning
105.	P-900485 May 1991	Duquesne Light Company	Pennsylvania	Office of Consumer Advocate	Purchased power contract and related ratemaking
106.	G900240 P910502 May 1991	Metropolitan Edison Company Pennsylvania Electric Company	Pennsylvania	Office of Consumer Advocate	Purchased power contract and related ratemaking
107.	GR901213915 May 1991	Elizabethtown Gas Company	New Jersey	Rate Counsel	Rate of Return
108.	91-5032 August 1991	Nevada Power Company	Nevada	U.S. Dept. of Energy	Rate of Return
109.	EL90-48-000 November 1991	Entergy Services	FERC	Louisiana PSC	Capacity transfer
110.	000662 September 1991	Southwestern Bell Telephone	Oklahoma	Attorney General	Rate of Return
111.	U-19236 October 1991	Arkansas Louisiana Gas Company	Louisiana	Louisiana PSC Staff	Rate of Return
112.	U-19237 December 1991	Louisiana Gas Service Company	Louisiana	Louisiana PSC Staff	Rate of Return
113.	ER91030356J October 1991	Rockland Electric Company	New Jersey	Rate Counsel	Rate of Return
114.	GR91071243J February 1992	South Jersey Gas Company	New Jersey	Rate Counsel	Rate of Return

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115.	GR91081393J March 1992	New Jersey Natural Gas Company	New Jersey	Rate Counsel	Rate of Return
116.	P-870235 et al. March 1992	Pennsylvania Electric Company	Pennsylvania	Office of Consumer Advocate	Cogeneration contracts
117.	8413 March 1992	Potomac Electric Power Company	Maryland	Dept. of Natural Resources	IPP purchased power contracts
118.	39236 March 1992	Indianapolis Power & Light Company	Indiana	Utility Consumer Counselor	Least-cost planning Need for power
119.	R-912164 April 1992	Equitable Gas Company	Pennsylvania	Office of Consumer Advocate	Rate of Return
120.	ER-91111698J May 1992	Public Service Electric & Gas Company	New Jersey	Rate Counsel	Rate of Return
121.	U-19631 June 1992	Trans Louisiana Gas Company	Louisiana	PSC Staff	Rate of Return
122.	ER-91121820J July 1992	Jersey Central Power & Light Company	New Jersey	Rate Counsel	Rate of Return
123.	R-00922314 August 1992	Metropolitan Edison Company	Pennsylvania	Office of Consumer Advocate	Rate of Return
124.	92-049-05 September 1992	US West Communications	Utah	Committee of Consumer Services	Rate of Return
125.	92PUE0037 September 1992	Commonwealth Gas Company	Virginia	Attorney General	Rate of Return
126.	EC92-21-000 September 1992	Entergy Services, Inc.	FERC	Louisiana PSC	Merger Impacts (Affidavit)
127.	ER92-341-000 December 1992	System Energy Resources	FERC	Louisiana PSC	Rate of Return
128.	U-19904 November 1992	Louisiana Power & Light Company	Louisiana	Staff	Merger analysis, competition competition issues
129.	8473 November 1992	Baltimore Gas & Electric Company	Maryland	Dept. of Natural Resources	QF contract evaluation
130.	IPC-E-92-25 January 1993	Idaho Power Company	Idaho	Federal Executive Agencies	Power Supply Clause

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131.	E002/GR-92-1185 February 1993	Northern States Power Company	Minnesota	Attorney General	Rate of Return
132.	92-102, Phase II March 1992	Central Maine Power Company	Maine	Staff	QF contracts prudence and procurements practices
133.	EC92-21-000 March 1993	Entergy Corporation	FERC	Louisiana PSC	Merger Issues
134.	8489 March 1993	Delmarva Power & Light Company	Maryland	Dept. of Natural Resources	Power Plant Certification
135.	11735 April 1993	Texas Electric Utilities Company	Texas	Federal Executives Agencies	Rate of Return
136.	2082 May 1993	Providence Gas Company	Rhode Island	Division of Public Utilities	Rate of Return
137.	P-00930715 December 1993	Bell Telephone Company of Pennsylvania	Pennsylvania	Office of Consumer Advocate	Rate of Return, Financial Projections, Bell/TCI merger
138.	R-00932670 February 1994	Pennsylvania-American Water Company	Pennsylvania	Office of Consumer Advocate	Rate of Return
139.	8583 February 1994	Conowingo Power Company	Maryland	Dept. of Natural Resources	Competitive Bidding for Power Supplies
140.	E-015/GR-94-001 April 1994	Minnesota Power & Light Company	Minnesota	Attorney General	Rate of Return
141.	CC Docket No. 94-1 May 1994	Generic Telephone	FCC	MCI Comm. Corp.	Rate of Return
142.	92-345, Phase II June 1994	Central Maine Power Company	Maine	Advocacy Staff	Price Cap Regulation Fuel Costs
143.	93-11065 April 1994	Nevada Power Company	Nevada	Federal Executive Agencies	Rate of Return
144.	94-0065 May 1994	Commonwealth Edison Company	Illinois	Federal Executive Agencies	Rate of Return
145.	GR94010002J June 1994	South Jersey Gas Company	New Jersey	Rate Counsel	Rate of Return
146.	WR94030059 July 1994	New Jersey-American Water Company	New Jersey	Rate Counsel	Rate of Return

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147.	RP91-203-000 June 1994	Tennessee Gas Pipeline Company	FERC	Customer Group	Environmental Externalities (oral testimony only)
148.	ER94-998-000 July 1994	Ocean State Power	FERC	Boston Edison Company	Rate of Return
149.	R-00942986 July 1994	West Penn Power Company	Pennsylvania	Office of Consumer Advocate	Rate of Return, Emission Allowances
150.	94-121 August 1994	South Central Bell Telephone Company	Kentucky	Attorney General	Rate of Return
151.	35854-S2 November 1994	PSI Energy, Inc.	Indiana	Utility Consumer Counsel	Merger Savings and Allocations
152.	IPC-E-94-5 November 1994	Idaho Power Company	Idaho	Federal Executive Agencies	Rate of Return
153.	November 1994	Edmonton Water	Alberta, Canada	Regional Customer Group	Rate of Return (Rebuttal Only)
154.	90-256 December 1994	South Central Bell Telephone Company	Kentucky	Attorney General	Incentive Plan True-Ups
155.	U-20925 February 1995	Louisiana Power & Light Company	Louisiana	PSC Staff	Rate of Return Industrial Contracts Trust Fund Earnings
156.	R-00943231 February 1995	Pennsylvania-American Water Company	Pennsylvania	Consumer Advocate	Rate of Return
157.	8678 March 1995	Generic	Maryland	Dept. Natural Resources	Electric Competition Incentive Regulation (oral only)
158.	R-000943271 April 1995	Pennsylvania Power & Light Company	Pennsylvania	Consumer Advocate	Rate of Return Nuclear decommissioning Capacity Issues
159.	U-20925 May 1995	Louisiana Power & Light Company	Louisiana	Commission Staff	Class Cost of Service Issues
160.	2290 June 1995	Narragansett Electric Company	Rhode Island	Division Staff	Rate of Return
161.	U-17949E June 1995	South Central Bell Telephone Company	Louisiana	Commission Staff	Rate of Return
162.	2304 July 1995	Providence Water Supply Board	Rhode Island	Division Staff	Cost recovery of Capital Spending Program

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163.	ER95-625-000 et al. August 1995	PSI Energy, Inc.	FERC	Office of Utility Consumer Counselor	Rate of Return
164.	P-00950915 et al. September 1995	Paxton Creek Cogeneration Assoc.	Pennsylvania	Office of Consumer Advocate	Cogeneration Contract Amendment
165.	8702 September 1995	Potomac Edison Company	Maryland	Dept. of Natural Resources	Allocation of DSM Costs (oral only)
166.	ER95-533-001 September 1995	Ocean State Power	FERC	Boston Edison Co.	Cost of Equity
167.	40003 November 1995	PSI Energy, Inc.	Indiana	Utility Consumer Counselor	Rate of Return Retail wheeling
168.	P-55, SUB 1013 January 1996	BellSouth	North Carolina	AT&T	Rate of Return
169.	P-7, SUB 825 January 1996	Carolina Tel.	North Carolina	AT&T	Rate of Return
170.	February 1996	Generic Telephone	FCC	MCI	Cost of capital
171.	95A-531EG April 1996	Public Service Company of Colorado	Colorado	Federal Executive Agencies	Merger issues
172.	ER96-399-000 May 1996	Northern Indiana Public Service Company	FERC	Indiana Office of Utility Consumer Counselor	Cost of capital
173.	8716 June 1996	Delmarva Power & Light Company	Maryland	Dept. of Natural Resources	DSM programs
174.	8725 July 1996	BGE/PEPCO	Maryland	Md. Energy Admin.	Merger Issues
175.	U-20925 August 1996	Entergy Louisiana, Inc.	Louisiana	PSC Staff	Rate of Return Allocations Fuel Clause
176.	EC96-10-000 September 1996	BGE/PEPCO	FERC	Md. Energy Admin.	Merger issues competition
177.	EL95-53-000 November 1996	Entergy Services, Inc.	FERC	Louisiana PSC	Nuclear Decommissioning
178.	WR96100768 March 1997	Consumers NJ Water Company	New Jersey	Ratepayer Advocate	Cost of Capital

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179.	WR96110818 April 1997	Middlesex Water Co.	New Jersey	Ratepayer Advocate	Cost of Capital
180.	U-11366 April 1997	Ameritech Michigan	Michigan	MCI	Access charge reform/financial condition
181.	97-074 May 1997	BellSouth	Kentucky	MCI	Rate Rebalancing financial condition
182.	2540 June 1997	New England Power	Rhode Island	PUC Staff	Divestiture Plan
183.	96-336-TP-CSS June 1997	Ameritech Ohio	Ohio	MCI	Access Charge reform Economic impacts
184.	WR97010052 July 1997	Maxim Sewerage Corp.	New Jersey	Ratepayer Advocate	Rate of Return
185.	97-300 August 1997	LG&E/KU	Kentucky	Attorney General	Merger Plan
186.	Case No. 8738 August 1997	Generic (oral testimony only)	Maryland	Dept. of Natural Resources	Electric Restructuring Policy
187.	Docket No. 2592 September 1997	Eastern Utilities	Rhode Island	PUC Staff	Generation Divestiture
188.	Case No.97-247 September 1997	Cincinnati Bell Telephone	Kentucky	MCI	Financial Condition
189.	Docket No. U-20925 November 1997	Entergy Louisiana	Louisiana	PSC Staff	Rate of Return
190.	Docket No. D97.7.90 November 1997	Montana Power Co.	Montana	Montana Consumers Counsel	Stranded Cost
191.	Docket No. EO97070459 November 1997	Jersey Central Power & Light Co.	New Jersey	Ratepayer Advocate	Stranded Cost
192.	Docket No. R-00974104 November 1997	Duquesne Light Co.	Pennsylvania	Office of Consumer Advocate	Stranded Cost
193.	Docket No. R-00973981 November 1997	West Penn Power Co.	Pennsylvania	Office of Consumer Advocate	Stranded Cost
194.	Docket No. A-1101150F0015 November 1997	Allegheny Power System DQE, Inc.	Pennsylvania	Office of Consumer Advocate	Merger Issues

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195.	Docket No. WR97080615 January 1998	Consumers NJ Water Company	New Jersey	Ratepayer Advocate	Rate of Return
196.	Docket No. R-00974149 January 1998	Pennsylvania Power Company	Pennsylvania	Office of Consumer Advocate	Stranded Cost
197.	Case No. 8774 January 1998	Allegheny Power System DQE, Inc.	Maryland	Dept. of Natural Resources MD Energy Administration	Merger Issues
198.	Docket No. U-20925 (SC) March 1998	Entergy Louisiana, Inc.	Louisiana	Commission Staff	Restructuring, Stranded Costs, Market Prices
199.	Docket No. U-22092 (SC) March 1998	Entergy Gulf States, Inc.	Louisiana	Commission Staff	Restructuring, Stranded Costs, Market Prices
200.	Docket Nos. U-22092 (SC) and U-20925(SC) May 1998	Entergy Gulf States and Entergy Louisiana	Louisiana	Commission Staff	Standby Rates
201.	Docket No. WR98010015 May 1998	NJ American Water Co.	New Jersey	Ratepayer Advocate	Rate of Return
202.	Case No. 8794 December 1998	Baltimore Gas & Electric Co.	Maryland	MD Energy Admin./Dept. Of Natural Resources	Stranded Cost/ Transition Plan
203.	Case No. 8795 December 1998	Delmarva Power & Light Co.	Maryland	MD Energy Admin./Dept. Of Natural Resources	Stranded Cost/ Transition Plan
204.	Case No. 8797 January 1998	Potomac Edison Co.	Maryland	MD Energy Admin./Dept. Of Natural Resources	Stranded Cost/ Transition Plan
205.	Docket No. WR98090795 March 1999	Middlesex Water Co.	New Jersey	Ratepayer Advocate	Rate of Return
206.	Docket No. 99-02-05 April 1999	Connecticut Light & Power	Connecticut	Attorney General	Stranded Costs
207.	Docket No. 99-03-04 May 1999	United Illuminating Company	Connecticut	Attorney General	Stranded Costs
208.	Docket No. U-20925 (FRP) June 1999	Entergy Louisiana, Inc.	Louisiana	Staff	Capital Structure
209.	Docket No. EC-98-40-000, et al. May 1999	American Electric Power/ Central & Southwest	FERC	Arkansas PSC	Market Power Mitigation
210.	Docket No. 99-03-35 July 1999	United Illuminating Company	Connecticut	Attorney General	Restructuring

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211.	Docket No. 99-03-36 July 1999	Connecticut Light & Power Co.	Connecticut	Attorney General	Restructuring
212.	WR99040249 Oct. 1999	Environmental Disposal Corp.	New Jersey	Ratepayer Advocate	Rate of Return
213.	2930 Nov. 1999	NEES/EUA	Rhode Island	Division Staff	Merger/Cost of Capital
214.	DE99-099 Nov. 1999	Public Service New Hampshire	New Hampshire	Consumer Advocate	Cost of Capital Issues
215.	00-01-11 Feb. 2000	Con Ed/NU	Connecticut	Attorney General	Merger Issues
216.	Case No. 8821 May 2000	Reliant/ODEC	Maryland	Dept. of Natural Resources	Need for Power/Plant Operations
217.	Case No. 8738 July 2000	Generic	Maryland	Dept. of Natural Resources	DSM Funding
218.	Case No. U-23356 June 2000	Entergy Louisiana, Inc.	Louisiana	PSC Staff	Fuel Prudence Issues Purchased Power
219.	Case No. 21453, et al July 2000	SWEPCO	Louisiana	PSC Staff	Stranded Costs
220.	Case No. 20925 (B) July 2000	Entergy Louisiana	Louisiana	PSC Staff	Purchase Power Contracts
221.	Case No. 24889 August 2000	Entergy Louisiana	Louisiana	PSC Staff	Purchase Power Contracts
222.	Case No. 21453, et al. February 2001	CLECO	Louisiana	PSC Staff	Stranded Costs
223.	P-00001860 and P-0000181 March 2001	GPU Companies	Pennsylvania	Office of Consumer Advocate	Rate of Return
224.	CVOL-0505662-S March 2001	ConEd/NU	Connecticut Superior Court	Attorney General	Merger (Affidavit)
225.	U-20925 (SC) March 2001	Entergy Louisiana	Louisiana	PSC Staff	Stranded Costs
226.	U-22092 (SC) March 2001	Entergy Gulf States	Louisiana	PSC Staff	Stranded Costs

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227.	U-25533 May 2001	Entergy Louisiana/ Gulf States	Louisiana Interruptible Service	PSC Staff	Purchase Power
228.	P-00011872 May 2001	Pike County Pike	Pennsylvania	Office of Consumer Advocate	Rate of Return
229.	8893 July 2001	Baltimore Gas & Electric Co.	Maryland	MD Energy Administration	Corporate Restructuring
230.	8890 September 2001	Potomac Electric/Connectivity	Maryland	MD Energy Administration	Merger Issues
231.	U-25533 August 2001	Entergy Louisiana / Gulf States	Louisiana	Staff	Purchase Power Contracts
232.	U-25965 November 2001	Generic	Louisiana	Staff	RTO Issues
233.	3401 March 2002	New England Gas Co.	Rhode Island	Division of Public Utilities	Rate of Return
234.	99-833-MJR April 2002	Illinois Power Co.	U.S. District Court	U.S. Department of Justice	New Source Review
235.	U-25533 March 2002	Entergy Louisiana/ Gulf States	Louisiana	PSC Staff	Nuclear Uprates Purchase Power
236.	P-00011872 May 2002	Pike County Power & Light	Pennsylvania	Consumer Advocate	POLR Service Costs
237.	U-26361, Phase I May 2002	Entergy Louisiana/ Gulf States	Louisiana	PSC Staff	Purchase Power Cost Allocations
238.	R-00016849C001 et al. June 2002	Generic	Pennsylvania	Pennsylvania OCA	Rate of Return
239.	U-26361, Phase II July 2002	Entergy Louisiana/ Entergy Gulf States	Louisiana	PSC Staff	Purchase Power Contracts
240.	U-20925(B) August 2002	Entergy Louisiana	Louisiana	PSC Staff	Tax Issues
241.	U-26531 October 2002	SWEPCO	Louisiana	PSC Staff	Purchase Power Contract
242.	8936 October 2002	Delmarva Power & Light	Maryland	Energy Administration Dept. Natural Resources	Standard Offer Service

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243.	U-25965 November 2002	SWEPCO/AEP	Louisiana	PSC Staff	RTO Cost/Benefit
244.	8908 Phase I November 2002	Generic	Maryland	Energy Administration Dept. Natural Resources	Standard Offer Service
245.	02S-315EG November 2002	Public Service Company of Colorado	Colorado	Fed. Executive Agencies	Rate of Return
246.	EL02-111-000 December 2002	PJM/MISO	FERC	MD PSC	Transmission Ratemaking
247.	02-0479 February 2003	Commonwealth Edison	Illinois	Dept. of Energy	POLR Service
248.	PL03-1-000 March 2003	Generic	FERC	NASUCA	Transmission Pricing (Affidavit)
249.	U-27136 April 2003	Entergy Louisiana	Louisiana	Staff	Purchase Power Contracts
250.	8908 Phase II July 2003	Generic	Maryland	Energy Administration Dept. of Natural Resources	Standard Offer Service
251.	U-27192 June 2003	Entergy Louisiana and Gulf States	Louisiana	LPSC Staff	Purchase Power Contract Cost Recovery
252.	C2-99-1181 October 2003	Ohio Edison Company	U.S. District Court	U.S. Department of Justice, et al.	Clean Air Act Compliance Economic Impact (Report)
253.	RP03-398-000 December 2003	Northern Natural Gas Co.	FERC	Municipal Distributors Group/Gas Task Force	Rate of Return
254.	8738 December 2003	Generic	Maryland	Energy Admin Department of Natural Resources	Environmental Disclosure (oral only)
255.	U-27136 December 2003	Entergy Louisiana, Inc.	Louisiana	PSC Staff	Purchase Power Contracts
256.	U-27192, Phase II October/December 2003	Entergy Louisiana & Entergy Gulf States	Louisiana	PSC Staff	Purchase Power Contracts
257.	WC Docket 03-173 December 2003	Generic	FCC	MCI	Cost of Capital (TELRIC)
258.	ER 030 20110 January 2004	Atlantic City Electric	New Jersey	Ratepayer Advocate	Rate of Return

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259.	E-01345A-03-0437 January 2004	Arizona Public Service Company	Arizona	Federal Executive Agencies	Rate of Return
260.	03-10001 January 2004	Nevada Power Company	Nevada	U.S. Dept. of Energy	Rate of Return
261.	R-00049255 June 2004	PPL Elec. Utility	Pennsylvania	Office of Consumer Advocate	Rate of Return
262.	U-20925 July 2004	Entergy Louisiana, Inc.	Louisiana	PSC Staff	Rate of Return Capacity Resources
263.	U-27866 September 2004	Southwest Electric Power Co.	Louisiana	PSC Staff	Purchase Power Contract
264.	U-27980 September 2004	Cleco Power	Louisiana	PSC Staff	Purchase Power Contract
265.	U-27865 October 2004	Entergy Louisiana, Inc. Entergy Gulf States	Louisiana	PSC Staff	Purchase Power Contract
266.	RP04-155 December 2004	Northern Natural Gas Company	FERC	Municipal Distributors Group/Gas Task Force	Rate of Return
267.	U-27836 January 2005	Entergy Louisiana/ Gulf States	Louisiana	PSC Staff	Power plant Purchase and Cost Recovery
268.	U-199040 et al. February 2005	Entergy Gulf States/ Louisiana	Louisiana	PSC Staff	Global Settlement, Multiple rate proceedings
269.	EF03070532 March 2005	Public Service Electric & Gas	New Jersey	Ratepayers Advocate	Securitization of Deferred Costs
270.	05-0159 June 2005	Commonwealth Edison	Illinois	Department of Energy	POLR Service
271.	U-28804 June 2005	Entergy Louisiana	Louisiana	LPSC Staff	QF Contract
272.	U-28805 June 2005	Entergy Gulf States	Louisiana	LPSC Staff	QF Contract
273.	05-0045-EI June 2005	Florida Power & Lt.	Florida	Federal Executive Agencies	Rate of Return
274.	9037 July 2005	Generic	Maryland	MD. Energy Administration	POLR Service

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275.	U-28155 August 2005	Entergy Louisiana Entergy Gulf States	Louisiana	LPSC Staff	Independent Coordinator of Transmission Plan
276.	U-27866-A September 2005	Southwestern Electric Power Company	Louisiana	LPSC Staff	Purchase Power Contract
277.	U-28765 October 2005	Cleco Power LLC	Louisiana	LPSC Staff	Purchase Power Contract
278.	U-27469 October 2005	Entergy Louisiana Entergy Gulf States	Louisiana	LPSC Staff	Avoided Cost Methodology
279.	A-313200F007 October 2005	Sprint (United of PA)	Pennsylvania	Office of Consumer Advocate	Corporate Restructuring
280.	EM05020106 November 2005	Public Service Electric & Gas Company	New Jersey	Ratepayer Advocate	Merger Issues
281.	U-28765 December 2005	Cleco Power LLC	Louisiana	LPSC Staff	Plant Certification, Financing, Rate Plan
282.	U-29157 February 2006	Cleco Power LLC	Louisiana	LPSC Staff	Storm Damage Financing
283.	U-29204 March 2006	Entergy Louisiana Entergy Gulf States	Louisiana	LPSC Staff	Purchase power contracts
284.	A-310325F006 March 2006	Alltel	Pennsylvania	Office of Consumer Advocate	Merger, Corporate Restructuring
285.	9056 March 2006	Generic	Maryland	Maryland Energy Administration	Standard Offer Service Structure
286.	C2-99-1182 April 2006	American Electric Power Utilities	U. S. District Court Southern District, Ohio	U. S. Department of Justice	New Source Review Enforcement (expert report)
287.	EM05121058 April 2006	Atlantic City Electric	New Jersey	Ratepayer Advocate	Power plant Sale
288.	ER05121018 June 2006	Jersey Central Power & Light Company	New Jersey	Ratepayer Advocate	NUG Contracts Cost Recovery
289.	U-21496, Subdocket C June 2006	Cleco Power LLC	Louisiana	Commission Staff	Rate Stabilization Plan
290.	GR0510085 June 2006	Public Service Electric & Gas Company	New Jersey	Ratepayer Advocate	Rate of Return (gas services)

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291.	R-000061366 July 2006	Metropolitan Ed. Company Penn. Electric Company	Pennsylvania	Office of Consumer Advocate	Rate of Return
292.	9064 September 2006	Generic	Maryland	Energy Administration	Standard Offer Service
293.	U-29599 September 2006	Cleco Power LLC	Louisiana	Commission Staff	Purchase Power Contracts
294.	WR06030257 September 2006	New Jersey American Water Company	New Jersey	Rate Counsel	Rate of Return
295.	U-27866/U-29702 October 2006	Southwestern Electric Power Company	Louisiana	Commission Staff	Purchase Power/Power Plant Certification
296.	9063 October 2006	Generic	Maryland	Energy Administration Department of Natural Resources	Generation Supply Policies
297.	EM06090638 November 2006	Atlantic City Electric	New Jersey	Rate Counsel	Power Plant Sale
298.	C-2000065942 November 2006	Pike County Light & Power	Pennsylvania	Consumer Advocate	Generation Supply Service
299.	ER06060483 November 2006	Rockland Electric Company	New Jersey	Rate Counsel	Rate of Return
300.	A-110150F0035 December 2006	Duquesne Light Company	Pennsylvania	Consumer Advocate	Merger Issues
301.	U-29203, Phase II January 2007	Entergy Gulf States Entergy Louisiana	Louisiana	Commission Staff	Storm Damage Cost Allocation
302.	06-11022 February 2007	Nevada Power Company	Nevada	U.S. Dept. of Energy	Rate of Return
303.	U-29526 March 2007	Cleco Power	Louisiana	Commission Staff	Affiliate Transactions
304.	P-00072245 March 2007	Pike County Light & Power	Pennsylvania	Consumer Advocate	Provider of Last Resort Service
305.	P-00072247 March 2007	Duquesne Light Company	Pennsylvania	Consumer Advocate	Provider of Last Resort Service
306.	EM07010026 May 2007	Jersey Central Power & Light Company	New Jersey	Rate Counsel	Power Plant Sale

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307.	U-30050 June 2007	Entergy Louisiana Entergy Gulf States	Louisiana	Commission Staff	Purchase Power Contract
308.	U-29956 June 2007	Entergy Louisiana	Louisiana	Commission Staff	Black Start Unit
309.	U-29702 June 2007	Southwestern Electric Power Company	Louisiana	Commission Staff	Power Plant Certification
310.	U-29955 July 2007	Entergy Louisiana Entergy Gulf States	Louisiana	Commission Staff	Purchase Power Contracts
311.	2007-67 July 2007	FairPoint Communications	Maine	Office of Public Advocate	Merger Financial Issues
312.	P-00072259 July 2007	Metropolitan Edison Co.	Pennsylvania	Office of Consumer Advocate	Purchase Power Contract Restructuring
313.	EO07040278 September 2007	Public Service Electric & Gas	New Jersey	Rate Counsel	Solar Energy Program Financial Issues
314.	U-30192 September 2007	Entergy Louisiana	Louisiana	Commission Staff	Power Plant Certification Ratemaking, Financing
315.	9117 (Phase II) October 2007	Generic (Electric)	Maryland	Energy Administration	Standard Offer Service Reliability
316.	U-30050 November 2007	Entergy Gulf States	Louisiana	Commission Staff	Power Plant Acquisition
317.	IPC-E-07-8 December 2007	Idaho Power Co.	Idaho	U.S. Department of Energy	Cost of Capital
318.	U-30422 (Phase I) January 2008	Entergy Gulf States	Louisiana	Commission Staff	Purchase Power Contract
319.	U-29702 (Phase II) February, 2008	Southwestern Electric Power Co.	Louisiana	Commission Staff	Power Plant Certification
320.	March 2008	Delmarva Power & Light	Delaware State Senate	Senate Committee	Wind Energy Economics
321.	U-30192 (Phase II) March 2008	Entergy Louisiana	Louisiana	Commission Staff	Cash CWIP Policy, Credit Ratings
322.	U-30422 (Phase II) April 2008	Entergy Gulf States - LA	Louisiana	Commission Staff	Power Plant Acquisition
323.	U-29955 (Phase II) April 2008	Entergy Gulf States - LA Entergy Louisiana	Louisiana	Commission Staff	Purchase Power Contract

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324.	GR-070110889 April 2008	New Jersey Natural Gas Company	New Jersey	Rate Counsel	Cost of Capital
325.	WR-08010020 July 2008	New Jersey American Water Company	New Jersey	Rate Counsel	Cost of Capital
326.	U-28804-A August 2008	Entergy Louisiana	Louisiana	Commission Staff	Cogeneration Contract
327.	IP-99-1693C-M/S August 2008	Duke Energy Indiana	Federal District Court	U.S. Department of Justice/ Environmental Protection Agency	Clean Air Act Compliance (Expert Report)
328.	U-30670 September 2008	Entergy Louisiana	Louisiana	Commission Staff	Nuclear Plant Equipment Replacement
329.	9149 October 2008	Generic	Maryland	Department of Natural Resources	Capacity Adequacy/Reliability
330.	IPC-E-08-10 October 2008	Idaho Power Company	Idaho	U.S. Department of Energy	Cost of Capital
331.	U-30727 October 2008	Cleco Power LLC	Louisiana	Commission Staff	Purchased Power Contract
332.	U-30689-A December 2008	Cleco Power LLC	Louisiana	Commission Staff	Transmission Upgrade Project
333.	IP-99-1693C-M/S February 2009	Duke Energy Indiana	Federal District Court	U.S. Department of Justice/EPA	Clean Air Act Compliance (Oral Testimony)
334.	U-30192, Phase II February 2009	Entergy Louisiana, LLC	Louisiana	Commission Staff	CWIP Rate Request Plant Allocation
335.	U-28805-B February 2009	Entergy Gulf States, LLC	Louisiana	Commission Staff	Cogeneration Contract
336.	P-2009-2093055 et al. May 2009	Metropolitan Edison Pennsylvania Electric	Pennsylvania	Office of Consumer Advocate	Default Service
337.	U-30958 July 2009	Cleco Power	Louisiana	Commission Staff	Purchase Power Contract
338.	EO08050326 August 2009	Jersey Central Power Light Co.	New Jersey	Rate Counsel	Demand response cost recovery
339.	GR09030195 August 2009	Elizabethtown Gas	New Jersey	New Jersey Rate Counsel	Cost of Capital

APPENDIX B

REFERENCED ELIZABETHTOWN GAS
DATA RESPONSES

- RCR-COC-9
- RCR-COC-10
- RCR-COC-15
- RCR-COC-16
- RCR-COC-19
- RCR-COC-20
- RCR-COC-21
- RCR-COC-22
- RCR-COC-25
- RCR-COC-27
- RCR-COC-36
- RCR-COC-37
- RCR-COC-39

IN THE MATTER OF THE PETITION OF PIVOTAL UTILITY HOLDINGS, INC. D/B/A ELIZABETHTOWN GAS FOR APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE AND OTHER TARIFF REVISIONS
BPU DOCKET NO. GR09030195

RM

RCR-COC-9

Q. **With respect to Dr. Morin's industry 46/54 capital structure, please indicate whether this capital structure excludes current maturities of long-term debt. If so, please explain why such an exclusion is appropriate for ratemaking purposes.**

A. The Value Line capital structure ratios used by Dr. Morin exclude current maturities of long-term debt. Therefore, Dr. Morin's industry 46/54 capital structure also excludes current maturities of long-term debt. Generally, current maturities of long-term debt have minimal impact on the overall capital structure of a company and much less of an impact for the average of a group of companies

IN THE MATTER OF THE PETITION OF PIVOTAL UTILITY HOLDINGS, INC. D/B/A ELIZABETHTOWN GAS FOR APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE AND OTHER TARIFF REVISIONS
BPU DOCKET NO. GR09030195

RM/MM

RCR-COC-10

Q. Please indicate the long-term target capital structure ratios for ETG and AGLR. As part of the response, please state the basis for these targets.

A. ETG has a minimum equity target capitalization of 45% as required by the BPU Order dated November 17, 2004 in Docket No. GF04090904. ETG adjusts its capitalization periodically based on AGLR's peer group long-term capitalization ratio. A study of AGLR's peer group is performed from time to time to determine the peer group long-term capitalization, and ETG's capitalization is adjusted accordingly to be consistent with such capitalization.

AGLR's target equity capitalization is 40% to 50% based on its peer group and the need to maintain the required capitalization ratio sufficient to keep a strong investment grade credit rating.

IN THE MATTER OF THE PETITION OF PIVOTAL UTILITY HOLDINGS, INC. D/B/A ELIZABETHTOWN GAS FOR APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE AND OTHER TARIFF REVISIONS
BPU DOCKET NO. GR09030195

RM/MM

RCR-COC-15

Q. Please identify all public issuances of common stock by AGLR within the past three years. As part of the response, please state:
a. Net proceeds;
b. Date of issuance;
c. Expenses (including underwriting fees); and
d. Whether such issuance was in connection with a merger or acquisition (or to help finance a merger or acquisition).

A. AGL Resources has had no public issuances of common stock within the past three years.

IN THE MATTER OF THE PETITION OF PIVOTAL UTILITY HOLDINGS, INC. D/B/A ELIZABETHTOWN GAS FOR APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE AND OTHER TARIFF REVISIONS
BPU DOCKET NO. GR09030195

RM/MM

RCR-COC-16

Q. Please identify any plans by AGLR for a public issuance of common equity.

A. AGL Resources has no current plans for a public issuance of common equity.

IN THE MATTER OF THE PETITION OF PIVOTAL UTILITY HOLDINGS, INC. D/B/A ELIZABETHTOWN GAS FOR APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE AND OTHER TARIFF REVISIONS BPU DOCKET NO. GR09030195

RM

RCR-COC-19

Q. At page 42, Dr. Morin references the "countless empirical tests of the CAPM." Please identify which of these "countless" studies employs a data base of companies that is primarily utility companies. In this context, "primarily" means that the majority of the companies used in the studies are classified as utility companies.

A. In order to examine the actual relationship between risk and return, these empirical studies typically rely on a very large population of stocks, covering the entire risk (beta) spectrum, typically drawn from the CRSP database. CRSP is an acronym for the Center for Research in Security Prices. The Center collects, verifies and reports monthly and daily stock and bond market information. Business and economics schools purchase annual updates of the data; researchers access it using Fortran, SAS, and other software programs. The gold standard in academic research, the CRSP data contains security level historical descriptive information and market data on more than 27,000 stocks (inactive and active companies) from the NYSE, Alternext and NASDAQ markets, including utility stocks. Of course, the empirical studies must rely on a broad sample of companies in order to span the entire risk spectrum. It would be inappropriate to conduct such studies on a limited subset of companies, utilities for example, because of the lack of variability in the data and insufficient degrees of freedom from a statistical perspective.

IN THE MATTER OF THE PETITION OF PIVOTAL UTILITY HOLDINGS, INC. D/B/A ELIZABETHTOWN GAS FOR APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE AND OTHER TARIFF REVISIONS BPU DOCKET NO. GR09030195

RM

RCR-COC-20

Q. At page 38, Dr. Morin refers to an equity risk premium of 6.5 or 7.1 percent, obtained from the 2008 Morningstar Yearbook. Please update both figures to include results for 2008 (i.e., published in 2009). As part of the response, provide a copy of the table(s) from Morningstar documenting the 6.5 and 7.1 percent risk premium results.

A. See attachments RCR-COC-20.1 and RCR-COC-20.2 for 2008 and 2009 Morningstar Yearbooks. The Morningstar (formerly Ibbotson Associates) study, Stocks, Bonds, Bills, and Inflation, 2009 Yearbook, compiling historical returns from 1926 to 2008, shows that a broad market sample of common stocks outperformed long-term U. S. Treasury bonds by 5.6%. The historical market risk premium ("MRP") over the income component of long-term Treasury bonds rather than over the total return is 6.5%. Given the unsettled conditions in the equity market, Dr. Morin views this estimate as extremely conservative. The application of the DCF model to a broad stock market index with current stock market data to obtain a prospective estimate of the MRP rather than a historical estimate, produces MRP estimates above the 9%-10% range on account of the very low level of government interest rates and the current turmoil in equity markets.

Summary Statistics for Basic and Inflation-Adjusted Series

Table 6-7 presents summary statistics of annual total returns, and where applicable, income and capital appreciation, for each asset class. The summary statistics presented here are arithmetic mean, geometric mean, standard deviation, and serial correlation. Table 6-8 presents summary statistics for the six inflation-adjusted total return series.

Table 6-7
Total Returns, Income Returns, and Capital Appreciation of the Basic Asset Classes
Summary Statistics of Annual Returns from 1926 to 2007

Series	Geometric Mean	Arithmetic Mean	Standard Deviation	Serial Correlation
Large Company Stocks				
Total Returns	10.4	12.3	20.0	0.03
Income	4.2	4.2	1.6	0.89
Capital Appreciation	6.0	7.8	19.3	0.03
Small Company Stocks (Total Returns)	12.5	17.1	32.6	0.06
Long-Term Corporate Bonds (Total Returns)	5.9	6.2	8.4	0.08
Long-Term Government Bonds				
Total Returns	5.5	5.8	9.2	−0.08
Income	5.2	5.2	2.7	0.96
Capital Appreciation	0.1	0.4	8.0	−0.23
Intermediate-Term Government Bonds				
Total Returns	5.3	5.5	5.7	0.15
Income	4.7	4.7	2.9	0.96
Capital Appreciation	0.5	0.5	4.4	−0.19
Treasury Bills (Total Returns)	3.7	3.8	3.1	0.91
Inflation	3.0	3.1	4.2	0.65

Total return is equal to the sum of three component returns: income return, capital appreciation return, and reinvestment return. Annual reinvestment returns for select asset classes are provided in Table 2-6.

Highlights of the Summary Statistics

Table 6-7 shows that over 1926–2007 small company stocks were the riskiest asset class with a standard deviation of 32.6 percent, but provide the greatest rewards to long-term investors, with an arithmetic mean annual return of 17.1 percent. The geometric mean of the small stock series is 12.5 percent. Large company stocks, long-term government bonds, long-term corporate bonds, and intermediate-term government bonds are progressively less risky, and have correspondingly lower average returns. Treasury bills were nearly riskless and had the lowest return. In general, risk is rewarded by a higher return over the long term.

2009 Ibbotson® Risk Premia Over Time Report

Estimates for 1926–2008

MORNINGSTAR®

The information presented in the 2009 Ibbotson® Risk Premia Over Time Report has been obtained with the greatest of care from sources believed to be reliable, but is not guaranteed to be complete, accurate or timely.

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Low-Cap Size Premia (all historical time periods) Percent per annum risk premia	42
Micro-Cap Size Premia (all historical time periods) Percent per annum risk premia	51

Introduction

The 2009 Ibbotson® Risk Premia Over Time Report contains data that summarizes the results of the capital markets for 2008, and features variables used to estimate the cost of capital. In addition, Tables A-1 through A-6 allow you to customize your analysis by selecting a particular start and end date for equity and size premia over any historical time period (1926–2008).

Each table consists of six pages and cover:

- ► Long-horizon equity risk premia
- ► Intermediate-horizon equity risk premia
- ► Short-horizon equity risk premia
- ► Mid-cap size premia
- ► Low-cap size premia
- ► Micro-cap size premia

Reading the Tables

The top row of each table indicates the starting year and the left column indicates the ending year. To find any statistic for a given time period, find the intersection of start and end dates.

Please note that we have constrained the beta and size premia tables to contain data only for five-year periods or longer. Again, each table consists of six pages of data.

Description of Data

Long-horizon equity risk premia: Large company stock total returns minus long-term government bond income returns.[1]

Intermediate-horizon equity risk premia: Large company stock total returns minus intermediate-term government bond income returns.[1]

Short-horizon equity risk premia: Large company stock total returns minus U.S. Treasury bill total returns.[1,2]

Mid-cap equity size premia: Returns in excess of those predicted by beta for the portfolio of stocks represented by the 3-5 deciles of the New York Stock Exchange, American Stock Exchange, and Nasdaq National Market; current capitalization at or below $7,360 million, but greater than $1,849 million.

Low-cap equity size premia: Returns in excess of those predicted by beta for the portfolio of stocks represented by the 6-8 deciles of the New York Stock Exchange, American Stock Exchange, and Nasdaq National Market; current capitalization at or below $1,849 million, but greater than $453 million.

Micro-cap equity size premia: Returns in excess of those predicted by beta for the portfolio of stocks represented by the 9-10 deciles of the New York Stock Exchange, American Stock Exchange, and Nasdaq National Market; current capitalization below $453 million.

For additional information regarding Morningstar's cost of capital related products, please visit our web site at:

global.morningstar.com/DataPublications

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[1] Expected risk premia are based on the differences of historical annual arithmetic mean return over the period selected

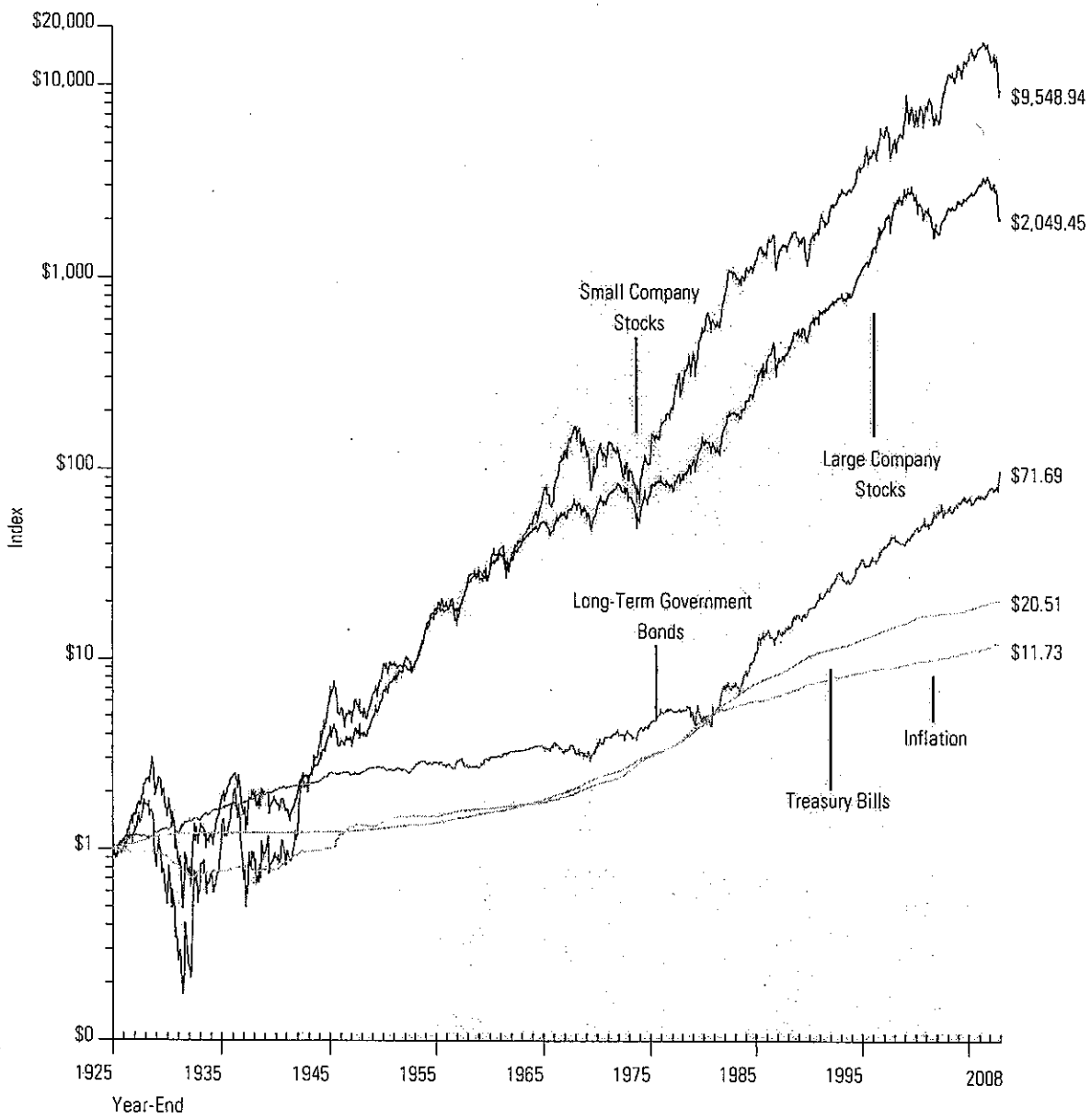
[2] For U.S. Treasury bills, the income return and total return are the same.

Wealth Indices of Investments in the U.S. Capital Markets

2009 Ibbotson SBBI Valuation Yearbook: Graph 2-1, page 22

Year-end 1925 = $1.00

From 1925 to 2008



Summary Statistics of Annual Returns : Basic Series (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Table 2-1, page 22
From 1926 to 2008

Series	Geometric Mean	Arithmetic Mean	Standard Deviation
Large Company Stocks			
Total Return[1]	9.6	11.7	20.6
Income	4.2	4.2	1.6
Capital Appreciation	5.3	7.3	19.8
Ibbotson Small Company Stocks			
Total Returns	11.7	16.4	33.0
Mid-Cap Stocks[2, 5]			
Total Return	10.5	13.4	24.9
Income	4.0	4.0	1.7
Capital Appreciation	6.4	9.2	24.2
Low-Cap Stocks[3, 5]			
Total Return	10.9	14.9	29.4
Income	3.6	3.6	2.0
Capital Appreciation	7.2	11.0	28.7
Micro-Cap Stocks[4, 5]			
Total Return	11.6	17.7	39.2
Income	2.5	2.6	1.8
Capital Appreciation	9.0	15.1	38.6
Long-Term Corporate Bonds			
Total Return	5.9	6.2	8.4
Long-Term Government Bonds			
Total Return	5.7	6.1	9.4
Income	5.2	5.2	2.7
Capital Appreciation	0.3	0.6	8.2
Intermediate-Term Government Bonds			
Total Return	5.4	5.6	5.7
Income	4.7	4.7	2.9
Capital Appreciation	0.6	0.7	4.5
Treasury Bills			
Total Return	3.7	3.8	3.1
Inflation	3.0	3.1	4.2

[1] Total return is equal to the sum of three component returns: income return, capital appreciation return, and reinvestment return.

[2] Mid-Cap stocks are represented here by CRSP NYSE/AMEX/NASDAQ deciles 3–5.

[3] Low-Cap stocks are represented here by CRSP NYSE/AMEX/NASDAQ deciles 6–8.

[4] Micro-Cap stocks are represented here by CRSP NYSE/AMEX/NASDAQ deciles 9–10.

[5] Calculated (or Derived) based on data from CRSP US Stock Database and CRSP US Indices Database ©2009 Center for Research in Security Prices (CRSP®), The University of Chicago Booth School of Business. Used with permission.

Key Variables in Estimating the Cost of Capital

2009 Ibbotson SBBI Valuation Yearbook: Appendix C, Table C-1
As of December 31, 2008

Yields (Riskless Rates)

Long-term (20-year) U.S. Treasury Coupon Bond Yield [1] 3.0%

Equity Risk Premium

Long-horizon expected equity risk premium (historical): Large company stock total returns minus long-term government bond income returns [2] 6.5%

Long-horizon expected equity risk premium (supply side): historical equity risk premium minus price-to-earnings ratio calculated using three-year average earnings [3] 5.7%

Size Premia (market capitalization in millions) [4]

Decile	Smallest Company		Largest Company	Size Premium (Return in Excess of CAPM)
Mid-Cap (3–5)	$1,849.950	–	$7,360.271	0.94%
Low-Cap (6–8)	$453.398	–	$1,848.961	1.74%
Micro-Cap (9–10)	$1.575	–	$453.254	3.74%
Breakdown of Deciles 1–10				
1-Largest	$18,627.540	–	$465,651.938	-0.36%
2	$7,434.806	–	$18,503.467	0.62%
3	$4,229.323	–	$7,360.271	0.74%
4	$2,785.698	–	$4,225.152	0.97%
5	$1,849.950	–	$2,785.538	1.54%
6	$1,198.013	–	$1,848.961	1.63%
7	$753.676	–	$1,197.133	1.62%
8	$453.398	–	$753.448	2.35%
9	$218.743	–	$453.254	2.71%
10-Smallest	$1.575		$218.533	5.81%
Breakout of the 10th decile				
10a	$136.599	–	$218.533	4.11%
10b	$1.575	–	$136.500	9.53%

[1] Maturity is approximate.

[2] Expected risk premium for equities is based on the difference of historical arithmetic mean returns for 1926-2008. Large company stocks are represented by the S&P 500.

[3] A supply side equity risk premium estimate was first published in Ibbotson's *2004 SBBI Valuation Edition Yearbook.*

[4] Return in excess of CAPM estimation. Mid-Cap stocks are defined here as the aggregate of size-deciles 3–5 of the NYSE/AMEX/NASDAQ; Low-Cap stocks are defined here as the aggregate of size-deciles 6–8 of the NYSE/AMEX/NASDAQ; Micro-Cap stocks are defined here as the aggregate of size-deciles 9–10 of the NYSE/AMEX/NASDAQ. The betas used in CAPM estimation were estimated from CRSP NYSE/AMEX/NASDAQ decile portfolio monthly total returns in excess of the 30-day U.S. Treasury bill total return versus the S&P 500 total returns in excess of the 30-day U.S. Treasury bill, January 1926–December 2008. Calculated (or Derived) based on data from CRSP US Stock Database and CRSP US Indices Database ©2009 Center for Research in Security Prices (CRSP®), The University of Chicago Booth School of Business. Used with permission.

Long-Horizon Equity Risk Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-1

End Date	Start Date 1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
1926	7.9														
1927	21.0	34.1													
1928	27.5	37.2	40.4												
1929	17.6	20.9	14.3	-11.9											
1930	8.5	8.6	0.1	-20.1	-28.2										
1931	-0.7	-2.5	-11.6	-28.9	-37.4	-46.7									
1932	-2.3	-4.0	-11.7	-24.7	-28.9	-29.3	-11.9								
1933	4.3	3.8	-1.2	-9.6	-9.0	-2.6	19.5	50.9							
1934	3.3	2.8	-1.7	-8.7	-8.1	-3.1	11.5	23.1	-4.6						
1935	7.5	7.4	4.1	-1.1	0.7	6.5	19.8	30.4	20.1	44.9					
1936	9.6	9.8	7.1	3.0	5.1	10.6	22.1	30.6	23.8	38.0	31.1				
1937	5.7	5.5	2.6	-1.6	-0.3	3.7	12.1	16.9	8.4	12.8	-3.3	-37.7			
1938	7.4	7.4	5.0	1.4	2.9	6.8	14.5	18.8	12.4	16.7	7.3	-4.6	28.5		
1939	6.7	6.6	4.3	1.1	2.3	5.7	12.3	15.7	9.9	12.8	4.8	-4.0	12.8	-2.8	
1940	5.5	5.3	3.1	0.0	1.0	4.0	9.6	12.3	6.8	8.7	1.4	-6.0	4.6	-7.4	-12.0
1941	4.3	4.0	1.9	-1.1	-0.2	2.4	7.3	9.4	4.2	5.5	-1.1	-7.5	0.0	-9.5	-12.8
1942	5.1	4.9	3.0	0.3	1.2	3.7	8.2	10.3	5.7	7.0	1.6	-3.3	3.6	-2.6	-2.6
1943	6.1	6.0	4.2	1.8	2.8	5.2	9.5	11.5	7.5	8.9	4.4	0.5	6.9	2.6	3.9
1944	6.7	6.6	5.0	2.8	3.8	6.1	10.1	11.9	8.4	9.7	5.8	2.6	8.4	5.0	6.6
1945	8.1	8.1	6.6	4.6	5.7	7.9	11.8	13.6	10.5	11.9	8.6	6.1	11.6	9.2	11.2
1946	7.2	7.2	5.7	3.8	4.7	6.8	10.4	12.0	9.0	10.1	6.9	4.5	9.2	6.8	8.2
1947	7.0	7.0	5.6	3.8	4.7	6.6	9.9	11.4	8.6	9.6	6.6	4.4	8.6	6.4	7.6
1948	6.9	6.8	5.5	3.8	4.6	6.4	9.5	10.9	8.2	9.1	6.4	4.3	8.1	6.1	7.1
1949	7.3	7.2	6.0	4.4	5.2	6.9	9.9	11.2	8.7	9.6	7.1	5.3	8.8	7.0	8.0
1950	8.2	8.2	7.0	5.5	6.4	8.1	11.0	12.2	10.0	10.9	8.6	7.0	10.4	8.9	10.0
1951	8.7	8.7	7.6	6.2	7.0	8.7	11.5	12.7	10.6	11.5	9.4	8.0	11.2	9.9	11.0
1952	8.9	9.0	8.0	6.6	7.4	9.0	11.7	12.9	10.9	11.7	9.8	8.5	11.5	10.3	11.3
1953	8.5	8.5	7.5	6.2	7.0	8.5	11.0	12.1	10.1	10.9	9.0	7.7	10.6	9.4	10.2
1954	9.9	10.0	9.1	7.9	8.7	10.2	12.7	13.8	12.0	12.9	11.2	10.1	12.9	11.9	12.9
1955	10.5	10.6	9.8	8.7	9.4	10.9	13.4	14.4	12.8	13.6	12.1	11.1	13.8	12.9	13.9
1956	10.3	10.4	9.6	8.5	9.2	10.7	13.0	14.0	12.4	13.2	11.7	10.7	13.2	12.4	13.3
1957	9.5	9.6	8.8	7.7	8.4	9.7	11.9	12.9	11.3	12.0	10.5	9.5	11.9	11.0	11.7
1958	10.5	10.5	9.8	8.8	9.5	10.8	13.0	13.9	12.4	13.1	11.8	10.9	13.2	12.4	13.2
1959	10.4	10.5	9.7	8.7	9.4	10.7	12.8	13.7	12.3	12.9	11.6	10.8	13.0	12.2	13.0
1960	10.0	10.0	9.3	8.4	9.0	10.2	12.2	13.1	11.7	12.3	11.0	10.2	12.2	11.5	12.2
1961	10.4	10.4	9.7	8.8	9.4	10.7	12.6	13.4	12.1	12.7	11.5	10.7	12.7	12.0	12.7
1962	9.7	9.8	9.1	8.2	8.8	9.9	11.8	12.5	11.2	11.8	10.6	9.8	11.7	11.0	11.6
1963	10.0	10.0	9.4	8.5	9.1	10.2	12.0	12.7	11.5	12.0	10.9	10.1	11.9	11.3	11.9
1964	10.0	10.1	9.4	8.6	9.2	10.3	12.0	12.7	11.5	12.0	10.9	10.2	12.0	11.3	11.9
1965	10.0	10.0	9.4	8.6	9.1	10.2	11.9	12.6	11.4	11.9	10.8	10.1	11.8	11.2	11.7
1966	9.4	9.4	8.8	8.0	8.5	9.5	11.1	11.8	10.6	11.1	10.0	9.3	10.9	10.3	10.8
1967	9.6	9.7	9.1	8.3	8.8	9.8	11.4	12.0	10.9	11.3	10.3	9.6	11.2	10.6	11.1
1968	9.5	9.6	9.0	8.2	8.7	9.7	11.2	11.8	10.7	11.2	10.2	9.5	11.0	10.4	10.9
1969	9.0	9.0	8.4	7.6	8.1	9.1	10.5	11.1	10.0	10.4	9.4	8.8	10.2	9.6	10.0
1970	8.7	8.7	8.2	7.4	7.9	8.8	10.2	10.8	9.7	10.1	9.1	8.4	9.8	9.2	9.6

*Standard and Poor's 500 index total returns minus long-term government bond income returns.

Long-Horizon Equity Risk Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-1

End Date	Start Date 1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
1971	8.7	8.7	8.1	7.4	7.9	8.7	10.1	10.7	9.6	10.0	9.0	8.4	9.8	9.2	9.6
1972	8.8	8.8	8.3	7.5	8.0	8.8	10.2	10.7	9.7	10.1	9.2	8.5	9.9	9.3	9.7
1973	8.2	8.2	7.6	6.9	7.3	8.1	9.4	10.0	8.9	9.3	8.4	7.7	9.0	8.4	8.8
1974	7.3	7.3	6.7	6.0	6.4	7.2	8.4	8.9	7.9	8.2	7.3	6.6	7.8	7.3	7.6
1975	7.8	7.8	7.2	6.5	6.9	7.7	8.9	9.4	8.4	8.7	7.8	7.2	8.4	7.9	8.2
1976	7.9	7.9	7.4	6.7	7.1	7.9	9.1	9.6	8.6	8.9	8.0	7.4	8.6	8.1	8.4
1977	7.5	7.5	7.0	6.3	6.6	7.4	8.6	9.0	8.1	8.4	7.5	6.9	8.0	7.5	7.8
1978	7.3	7.3	6.8	6.1	6.5	7.2	8.4	8.8	7.9	8.1	7.3	6.7	7.8	7.3	7.5
1979	7.4	7.4	6.8	6.2	6.6	7.3	8.4	8.8	7.9	8.2	7.3	6.8	7.9	7.3	7.6
1980	7.6	7.6	7.1	6.5	6.9	7.6	8.7	9.1	8.2	8.5	7.7	7.2	8.2	7.7	8.0
1981	7.2	7.2	6.7	6.1	6.4	7.1	8.2	8.6	7.7	8.0	7.2	6.6	7.6	7.1	7.4
1982	7.2	7.2	6.7	6.1	6.4	7.1	8.2	8.6	7.7	8.0	7.2	6.7	7.6	7.2	7.4
1983	7.3	7.3	6.8	6.2	6.6	7.2	8.2	8.6	7.8	8.0	7.3	6.8	7.7	7.3	7.5
1984	7.1	7.1	6.6	6.0	6.3	7.0	8.0	8.4	7.5	7.8	7.0	6.5	7.5	7.0	7.2
1985	7.3	7.3	6.9	6.3	6.6	7.2	8.2	8.6	7.8	8.0	7.3	6.8	7.7	7.3	7.5
1986	7.4	7.4	6.9	6.3	6.6	7.3	8.2	8.6	7.8	8.1	7.3	6.9	7.8	7.3	7.6
1987	7.2	7.2	6.7	6.2	6.5	7.1	8.0	8.4	7.6	7.9	7.1	6.7	7.6	7.1	7.3
1988	7.2	7.2	6.8	6.2	6.5	7.1	8.0	8.4	7.6	7.9	7.2	6.7	7.6	7.1	7.3
1989	7.5	7.4	7.0	6.5	6.8	7.4	8.3	8.7	7.9	8.1	7.4	7.0	7.9	7.5	7.7
1990	7.2	7.2	6.7	6.2	6.5	7.1	8.0	8.3	7.6	7.8	7.1	6.7	7.5	7.1	7.3
1991	7.4	7.4	7.0	6.4	6.7	7.3	8.2	8.5	7.8	8.0	7.4	6.9	7.8	7.4	7.6
1992	7.3	7.3	6.9	6.3	6.6	7.2	8.1	8.4	7.7	7.9	7.3	6.8	7.6	7.2	7.4
1993	7.2	7.2	6.8	6.3	6.6	7.1	8.0	8.3	7.6	7.8	7.2	6.8	7.6	7.2	7.4
1994	7.0	7.0	6.6	6.1	6.4	6.9	7.8	8.1	7.4	7.6	7.0	6.5	7.3	6.9	7.1
1995	7.4	7.4	7.0	6.5	6.7	7.3	8.1	8.4	7.8	8.0	7.3	6.9	7.7	7.4	7.5
1996	7.5	7.5	7.1	6.6	6.9	7.4	8.3	8.6	7.9	8.1	7.5	7.1	7.9	7.5	7.7
1997	7.8	7.8	7.4	6.9	7.2	7.7	8.5	8.9	8.2	8.4	7.8	7.4	8.2	7.8	8.0
1998	8.0	8.0	7.6	7.1	7.4	7.9	8.8	9.1	8.4	8.6	8.1	7.7	8.4	8.1	8.3
1999	8.1	8.1	7.7	7.3	7.5	8.0	8.9	9.2	8.5	8.7	8.2	7.8	8.5	8.2	8.4
2000	7.8	7.8	7.4	6.9	7.2	7.7	8.5	8.8	8.2	8.4	7.8	7.4	8.2	7.8	8.0
2001	7.4	7.4	7.1	6.6	6.9	7.4	8.1	8.4	7.8	8.0	7.4	7.1	7.8	7.4	7.6
2002	7.0	7.0	6.6	6.1	6.4	6.9	7.6	7.9	7.3	7.5	6.9	6.5	7.2	6.9	7.0
2003	7.2	7.2	6.8	6.4	6.6	7.1	7.8	8.1	7.5	7.7	7.1	6.8	7.5	7.1	7.3
2004	7.2	7.2	6.8	6.4	6.6	7.1	7.8	8.1	7.5	7.7	7.1	6.8	7.4	7.1	7.3
2005	7.1	7.1	6.7	6.3	6.5	7.0	7.7	8.0	7.4	7.6	7.0	6.7	7.3	7.0	7.2
2006	7.1	7.1	6.8	6.4	6.6	7.0	7.8	8.0	7.4	7.6	7.1	6.7	7.4	7.1	7.2
2007	7.1	7.0	6.7	6.3	6.5	7.0	7.7	7.9	7.4	7.5	7.0	6.7	7.3	7.0	7.1
2008	6.5	6.5	6.1	5.7	5.9	6.3	7.0	7.3	6.7	6.9	6.3	6.0	6.6	6.3	6.4

*Standard and Poor's 500 index total returns minus long-term government bond income returns.

Long-Horizon Equity Risk Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-1

End Date	Start Date 1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
1926															
1927															
1928															
1929															
1930															
1931															
1932															
1933															
1934															
1935															
1936															
1937															
1938															
1939															
1940															
1941	-13.5														
1942	2.2	17.9													
1943	9.3	20.7	23.5												
1944	11.3	19.5	20.4	17.3											
1945	15.8	23.2	24.9	25.7	34.1										
1946	11.5	16.5	16.2	13.8	12.0	-10.1									
1947	10.4	14.4	13.7	11.2	9.2	-3.3	3.6								
1948	9.5	12.8	11.9	9.6	7.7	-1.1	3.3	3.1							
1949	10.3	13.2	12.6	10.7	9.4	3.3	7.7	9.8	16.5						
1950	12.2	15.0	14.7	13.4	12.8	8.5	13.2	16.4	23.1	29.6					
1951	13.0	15.7	15.5	14.5	14.1	10.7	14.9	17.7	22.6	25.6	21.6				
1952	13.3	15.7	15.5	14.6	14.3	11.4	15.0	17.3	20.9	22.3	18.7	15.7			
1953	12.0	14.1	13.7	12.8	12.3	9.5	12.3	13.8	15.9	15.8	11.2	5.9	-3.8		
1954	14.7	16.8	16.7	16.1	16.0	14.0	17.0	18.9	21.6	22.6	20.8	20.6	23.0	49.8	
1955	15.6	17.7	17.7	17.2	17.2	15.5	18.3	20.2	22.6	23.6	22.4	22.6	24.9	39.3	28.8
1956	14.9	16.7	16.7	16.1	16.0	14.4	16.9	18.3	20.2	20.8	19.3	18.8	19.6	27.4	16.2
1957	13.1	14.8	14.6	14.0	13.7	12.0	14.0	15.1	16.4	16.4	14.5	13.3	12.8	17.0	6.1
1958	14.6	16.3	16.2	15.7	15.6	14.2	16.2	17.3	18.8	19.0	17.7	17.1	17.4	21.6	14.6
1959	14.3	15.8	15.7	15.2	15.1	13.7	15.6	16.6	17.8	17.9	16.6	16.0	16.0	19.3	13.2
1960	13.4	14.8	14.6	14.1	13.9	12.6	14.2	15.0	16.0	15.9	14.6	13.8	13.6	16.0	10.4
1961	13.8	15.2	15.1	14.6	14.4	13.2	14.8	15.6	16.5	16.5	15.3	14.7	14.6	16.9	12.2
1962	12.6	13.9	13.7	13.2	12.9	11.7	13.1	13.7	14.4	14.3	13.0	12.2	11.9	13.6	9.1
1963	12.9	14.1	13.9	13.5	13.3	12.1	13.4	14.0	14.7	14.6	13.5	12.8	12.5	14.1	10.2
1964	12.9	14.0	13.9	13.4	13.2	12.1	13.3	13.9	14.6	14.5	13.4	12.7	12.5	14.0	10.4
1965	12.7	13.8	13.6	13.2	13.0	11.9	13.1	13.6	14.2	14.1	13.0	12.4	12.2	13.5	10.2
1966	11.7	12.7	12.4	12.0	11.7	10.7	11.7	12.1	12.6	12.4	11.3	10.6	10.3	11.3	8.1
1967	11.9	12.9	12.7	12.3	12.1	11.1	12.1	12.5	13.0	12.8	11.8	11.2	10.9	11.9	9.0
1968	11.7	12.6	12.4	12.0	11.8	10.8	11.8	12.2	12.6	12.4	11.4	10.8	10.5	11.5	8.8
1969	10.8	11.7	11.4	11.0	10.7	9.8	10.6	10.9	11.3	11.1	10.1	9.4	9.1	9.9	7.2
1970	10.4	11.2	10.9	10.5	10.2	9.3	10.1	10.3	10.7	10.4	9.4	8.8	8.4	9.1	6.6

*Standard and Poor's 500 index total returns minus long-term government bond income returns.

Long-Horizon Equity Risk Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-1

End Date	Start Date 1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
1971	10.3	11.1	10.8	10.4	10.1	9.2	10.0	10.2	10.6	10.3	9.4	8.7	8.4	9.1	6.7
1972	10.4	11.1	10.9	10.5	10.2	9.4	10.1	10.4	10.7	10.4	9.5	9.0	8.6	9.3	7.0
1973	9.4	10.1	9.9	9.4	9.2	8.3	8.9	9.1	9.4	9.1	8.2	7.6	7.2	7.8	5.5
1974	8.1	8.8	8.5	8.0	7.7	6.8	7.4	7.6	7.7	7.4	6.5	5.8	5.3	5.8	3.6
1975	8.7	9.4	9.1	8.7	8.4	7.6	8.2	8.3	8.5	8.2	7.4	6.8	6.4	6.8	4.8
1976	8.9	9.6	9.3	8.9	8.7	7.8	8.4	8.6	8.8	8.5	7.7	7.1	6.8	7.2	5.3
1977	8.3	8.9	8.7	8.2	8.0	7.1	7.7	7.8	8.0	7.7	6.9	6.3	5.9	6.3	4.5
1978	8.1	8.6	8.4	8.0	7.7	6.9	7.4	7.5	7.7	7.4	6.6	6.0	5.7	6.0	4.2
1979	8.1	8.7	8.4	8.0	7.7	7.0	7.5	7.6	7.8	7.5	6.7	6.2	5.8	6.2	4.4
1980	8.5	9.0	8.8	8.4	8.2	7.4	7.9	8.1	8.2	7.9	7.2	6.7	6.4	6.8	5.1
1981	7.9	8.4	8.1	7.7	7.5	6.7	7.2	7.3	7.5	7.2	6.5	6.0	5.6	6.0	4.3
1982	7.9	8.4	8.1	7.8	7.5	6.8	7.3	7.4	7.5	7.2	6.5	6.0	5.7	6.0	4.5
1983	8.0	8.5	8.2	7.9	7.6	6.9	7.4	7.5	7.6	7.4	6.7	6.2	5.9	6.2	4.7
1984	7.7	8.2	7.9	7.5	7.3	6.6	7.0	7.1	7.3	7.0	6.3	5.9	5.6	5.9	4.4
1985	7.9	8.4	8.2	7.8	7.6	7.0	7.4	7.5	7.6	7.4	6.7	6.3	6.0	6.3	4.9
1986	8.0	8.5	8.2	7.9	7.7	7.0	7.5	7.5	7.7	7.4	6.8	6.4	6.1	6.4	5.1
1987	7.8	8.2	8.0	7.7	7.4	6.8	7.2	7.3	7.4	7.2	6.6	6.1	5.9	6.1	4.8
1988	7.8	8.2	8.0	7.7	7.4	6.8	7.2	7.3	7.4	7.2	6.6	6.2	5.9	6.2	4.9
1989	8.1	8.5	8.3	8.0	7.8	7.2	7.6	7.7	7.8	7.6	7.0	6.6	6.4	6.7	5.4
1990	7.7	8.1	7.9	7.6	7.4	6.8	7.1	7.2	7.3	7.1	6.5	6.2	5.9	6.2	5.0
1991	8.0	8.4	8.2	7.9	7.7	7.1	7.5	7.6	7.7	7.5	6.9	6.6	6.3	6.6	5.4
1992	7.8	8.2	8.0	7.7	7.5	7.0	7.3	7.4	7.5	7.3	6.8	6.4	6.2	6.4	5.3
1993	7.7	8.1	7.9	7.6	7.4	6.9	7.2	7.3	7.4	7.2	6.7	6.3	6.1	6.3	5.2
1994	7.5	7.9	7.7	7.4	7.2	6.6	7.0	7.0	7.1	6.9	6.4	6.1	5.8	6.1	5.0
1995	7.9	8.3	8.1	7.8	7.6	7.1	7.4	7.5	7.6	7.4	6.9	6.6	6.4	6.6	5.6
1996	8.0	8.4	8.3	8.0	7.8	7.3	7.6	7.7	7.8	7.6	7.1	6.8	6.6	6.9	5.8
1997	8.4	8.8	8.6	8.3	8.2	7.7	8.0	8.1	8.2	8.0	7.6	7.3	7.1	7.3	6.3
1998	8.6	9.0	8.9	8.6	8.4	7.9	8.3	8.4	8.5	8.3	7.9	7.6	7.4	7.7	6.7
1999	8.7	9.1	9.0	8.7	8.6	8.1	8.4	8.5	8.6	8.5	8.0	7.8	7.6	7.8	6.9
2000	8.3	8.7	8.5	8.3	8.1	7.7	8.0	8.1	8.2	8.0	7.6	7.3	7.1	7.3	6.4
2001	7.9	8.3	8.1	7.8	7.7	7.2	7.5	7.6	7.7	7.5	7.1	6.8	6.6	6.8	5.9
2002	7.3	7.7	7.5	7.2	7.1	6.6	6.9	6.9	7.0	6.8	6.4	6.1	5.9	6.1	5.2
2003	7.6	7.9	7.8	7.5	7.4	6.9	7.2	7.3	7.3	7.2	6.7	6.4	6.3	6.5	5.6
2004	7.6	7.9	7.7	7.5	7.3	6.9	7.2	7.2	7.3	7.1	6.7	6.4	6.3	6.5	5.6
2005	7.5	7.8	7.6	7.4	7.2	6.8	7.0	7.1	7.2	7.0	6.6	6.3	6.1	6.3	5.5
2006	7.5	7.8	7.7	7.4	7.3	6.8	7.1	7.2	7.2	7.1	6.7	6.4	6.2	6.4	5.6
2007	7.4	7.7	7.6	7.3	7.2	6.7	7.0	7.1	7.1	7.0	6.6	6.3	6.1	6.3	5.5
2008	6.7	7.0	6.8	6.6	6.4	6.0	6.2	6.3	6.3	6.2	5.7	5.5	5.3	5.4	4.6

*Standard and Poor's 500 index total returns minus long-term government bond income returns.

Long-Horizon Equity Risk Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-1

End	Start Date														
Date	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
1926															
1927															
1928															
1929															
1930															
1931															
1932															
1933															
1934															
1935															
1936															
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1947															
1948															
1949															
1950															
1951															
1952															
1953															
1954															
1955															
1956	3.6														
1957	-5.3	-14.2													
1958	9.8	12.9	40.1												
1959	9.3	11.3	24.0	7.9											
1960	6.7	7.5	14.7	2.1	-3.8										
1961	9.4	10.6	16.8	9.1	9.6	23.1									
1962	6.3	6.7	10.9	3.6	2.2	5.2	-12.7								
1963	7.9	8.5	12.2	6.7	6.4	9.7	3.1	18.9							
1964	8.4	9.0	12.3	7.6	7.6	10.4	6.2	15.6	12.3						
1965	8.3	8.9	11.8	7.7	7.7	10.0	6.7	13.2	10.3	8.3					
1966	6.3	6.5	8.8	4.9	4.5	5.9	2.4	6.2	2.0	-3.1	-14.6				
1967	7.4	7.7	9.9	6.5	6.4	7.8	5.3	8.9	6.4	4.4	2.4	19.4			
1968	7.2	7.5	9.5	6.4	6.3	7.5	5.3	8.3	6.2	4.7	3.5	12.5	5.6		
1969	5.7	5.8	7.5	4.5	4.2	5.1	2.8	5.1	2.8	0.8	-1.0	3.5	-4.4	-14.5	
1970	5.1	5.2	6.7	3.9	3.6	4.3	2.2	4.1	1.9	0.2	-1.4	1.9	-3.9	-8.7	-2.9

*Standard and Poor's 500 index total returns minus long-term government bond income returns.

Long-Horizon Equity Risk Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-1

End Date	Start Date 1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
1971	5.3	5.4	6.8	4.2	3.9	4.6	2.8	4.5	2.7	1.3	0.2	3.1	-0.9	-3.1	2.5
1972	5.7	5.9	7.2	4.9	4.6	5.3	3.7	5.4	3.9	2.8	2.0	4.8	1.9	0.9	6.1
1973	4.2	4.3	5.4	3.1	2.8	3.3	1.6	3.0	1.4	0.1	-0.9	1.1	-2.0	-3.5	-0.7
1974	2.2	2.2	3.1	0.8	0.4	0.6	-1.1	-0.1	-1.8	-3.3	-4.5	-3.3	-6.5	-8.5	-7.3
1975	3.6	3.6	4.6	2.5	2.2	2.6	1.1	2.2	0.8	-0.3	-1.2	0.3	-2.0	-3.1	-1.2
1976	4.2	4.2	5.2	3.2	3.0	3.4	2.1	3.1	1.9	1.1	0.4	1.9	0.0	-0.7	1.2
1977	3.3	3.3	4.2	2.3	2.0	2.4	1.1	2.0	0.8	-0.1	-0.8	0.4	-1.5	-2.2	-0.7
1978	3.1	3.1	4.0	2.1	1.8	2.2	0.9	1.8	0.6	-0.2	-0.9	0.3	-1.4	-2.2	-0.8
1979	3.4	3.4	4.2	2.5	2.2	2.6	1.4	2.2	1.2	0.5	-0.1	1.0	-0.5	-1.1	0.3
1980	4.2	4.2	5.0	3.4	3.2	3.5	2.5	3.4	2.5	1.8	1.4	2.6	1.3	0.9	2.3
1981	3.4	3.4	4.1	2.6	2.3	2.6	1.6	2.3	1.4	0.8	0.3	1.3	0.0	-0.4	0.7
1982	3.6	3.6	4.3	2.8	2.6	2.8	1.9	2.6	1.8	1.2	0.7	1.7	0.5	0.2	1.3
1983	3.9	3.9	4.6	3.2	3.0	3.3	2.4	3.1	2.3	1.7	1.4	2.3	1.3	1.0	2.1
1984	3.5	3.5	4.2	2.8	2.6	2.9	2.0	2.7	1.9	1.4	1.0	1.9	0.9	0.6	1.6
1985	4.1	4.1	4.8	3.5	3.3	3.6	2.8	3.5	2.8	2.3	2.0	2.9	2.0	1.7	2.7
1986	4.3	4.3	5.0	3.7	3.5	3.8	3.1	3.7	3.1	2.6	2.4	3.2	2.4	2.2	3.2
1987	4.1	4.1	4.7	3.5	3.3	3.6	2.8	3.5	2.8	2.4	2.1	2.9	2.1	1.9	2.8
1988	4.2	4.2	4.8	3.6	3.5	3.7	3.0	3.6	3.0	2.6	2.4	3.1	2.4	2.2	3.1
1989	4.7	4.8	5.4	4.2	4.1	4.4	3.7	4.3	3.8	3.4	3.2	4.0	3.3	3.2	4.1
1990	4.3	4.3	4.9	3.8	3.6	3.9	3.2	3.8	3.2	2.9	2.6	3.4	2.7	2.5	3.3
1991	4.8	4.8	5.4	4.3	4.2	4.5	3.8	4.4	3.9	3.6	3.4	4.1	3.5	3.4	4.2
1992	4.7	4.7	5.2	4.2	4.1	4.3	3.7	4.3	3.8	3.5	3.3	4.0	3.4	3.3	4.0
1993	4.6	4.6	5.2	4.2	4.1	4.3	3.7	4.2	3.7	3.4	3.3	3.9	3.3	3.3	4.0
1994	4.4	4.4	4.9	3.9	3.8	4.0	3.4	3.9	3.5	3.2	3.0	3.6	3.0	2.9	3.6
1995	5.0	5.0	5.5	4.6	4.5	4.7	4.2	4.7	4.3	4.0	3.9	4.5	4.0	3.9	4.6
1996	5.3	5.3	5.8	4.9	4.8	5.1	4.6	5.1	4.7	4.4	4.3	4.9	4.4	4.4	5.1
1997	5.8	5.8	6.3	5.5	5.4	5.7	5.2	5.7	5.3	5.1	5.0	5.6	5.2	5.2	5.9
1998	6.2	6.2	6.7	5.9	5.9	6.1	5.7	6.2	5.8	5.6	5.5	6.2	5.7	5.7	6.4
1999	6.4	6.5	7.0	6.1	6.1	6.4	5.9	6.4	6.1	5.9	5.8	6.4	6.0	6.1	6.7
2000	5.9	6.0	6.4	5.6	5.6	5.8	5.4	5.8	5.5	5.3	5.2	5.8	5.4	5.4	6.0
2001	5.4	5.4	5.9	5.1	5.0	5.2	4.8	5.2	4.9	4.7	4.6	5.1	4.7	4.7	5.3
2002	4.7	4.7	5.1	4.3	4.3	4.5	4.0	4.4	4.1	3.8	3.7	4.2	3.8	3.7	4.3
2003	5.1	5.1	5.6	4.8	4.7	4.9	4.5	4.9	4.5	4.3	4.2	4.8	4.3	4.3	4.9
2004	5.1	5.1	5.6	4.8	4.7	4.9	4.5	4.9	4.6	4.4	4.3	4.8	4.4	4.4	4.9
2005	5.0	5.0	5.4	4.7	4.6	4.8	4.4	4.8	4.5	4.3	4.2	4.7	4.3	4.2	4.8
2006	5.1	5.2	5.6	4.8	4.8	5.0	4.6	5.0	4.6	4.4	4.4	4.8	4.5	4.4	4.9
2007	5.0	5.1	5.5	4.8	4.7	4.9	4.5	4.9	4.5	4.4	4.3	4.7	4.4	4.3	4.8
2008	4.2	4.2	4.5	3.8	3.7	3.9	3.5	3.9	3.5	3.3	3.2	3.6	3.2	3.2	3.6

*Standard and Poor's 500 index total returns minus long-term government bond income returns.

Long-Horizon Equity Risk Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-1

End Date	Start Date 1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
1971	8.0														
1972	10.6	13.1													
1973	0.0	-4.0	-21.2												
1974	-8.5	-13.9	-27.5	-33.7											
1975	-0.9	-3.1	-8.6	-2.2	29.2										
1976	1.9	0.7	-2.4	3.8	22.6	16.0									
1977	-0.4	-1.8	-4.8	-0.7	10.3	0.9	-14.3								
1978	-0.5	-1.7	-4.2	-0.8	7.4	0.1	-7.8	-1.3							
1979	0.6	-0.3	-2.2	0.9	7.9	2.5	-2.0	4.2	9.8						
1980	2.8	2.2	0.9	4.0	10.3	6.5	4.2	10.3	16.1	22.5					
1981	1.1	0.4	-1.1	1.5	6.5	2.7	0.0	3.6	5.3	3.0	-16.5				
1982	1.6	1.1	-0.1	2.2	6.7	3.5	1.4	4.5	6.0	4.7	-4.2	8.1			
1983	2.5	2.0	1.0	3.2	7.3	4.6	2.9	5.8	7.2	6.6	1.3	10.1	12.2		
1984	1.9	1.4	0.4	2.4	6.0	3.4	1.9	4.2	5.1	4.2	-0.4	4.9	3.4	-5.5	
1985	3.1	2.8	2.0	3.9	7.3	5.1	3.9	6.2	7.3	6.9	3.8	8.8	9.1	7.5	20.5
1986	3.5	3.2	2.5	4.4	7.5	5.6	4.5	6.6	7.6	7.3	4.7	9.0	9.2	8.2	15.1
1987	3.2	2.9	2.2	3.9	6.7	4.9	3.9	5.7	6.5	6.0	3.7	7.0	6.8	5.5	9.2
1988	3.4	3.1	2.5	4.1	6.8	5.1	4.2	5.9	6.6	6.2	4.2	7.1	7.0	5.9	8.8
1989	4.4	4.2	3.7	5.3	7.9	6.4	5.6	7.3	8.1	7.9	6.3	9.1	9.2	8.8	11.6
1990	3.7	3.4	2.9	4.3	6.7	5.2	4.4	5.8	6.4	6.1	4.5	6.8	6.7	5.9	7.8
1991	4.5	4.4	3.9	5.3	7.6	6.2	5.6	7.0	7.7	7.5	6.1	8.4	8.4	7.9	9.9
1992	4.4	4.2	3.7	5.0	7.2	5.9	5.3	6.6	7.1	6.9	5.6	7.6	7.6	7.1	8.7
1993	4.3	4.1	3.7	4.9	7.0	5.7	5.1	6.3	6.9	6.6	5.4	7.2	7.2	6.7	8.0
1994	3.9	3.7	3.3	4.4	6.4	5.2	4.6	5.7	6.1	5.9	4.7	6.3	6.1	5.6	6.7
1995	4.9	4.8	4.4	5.6	7.5	6.4	5.9	7.0	7.5	7.4	6.3	8.0	8.0	7.6	8.8
1996	5.4	5.3	5.0	6.1	7.9	6.9	6.4	7.5	8.0	7.9	7.0	8.6	8.6	8.3	9.5
1997	6.2	6.1	5.8	7.0	8.7	7.8	7.4	8.5	9.0	9.0	8.2	9.7	9.8	9.6	10.8
1998	6.8	6.7	6.5	7.6	9.3	8.4	8.1	9.2	9.7	9.7	9.0	10.5	10.6	10.5	11.7
1999	7.1	7.0	6.8	7.9	9.6	8.7	8.4	9.5	10.0	10.0	9.3	10.7	10.9	10.8	11.9
2000	6.3	6.3	6.0	7.0	8.6	7.8	7.4	8.4	8.8	8.8	8.1	9.4	9.4	9.3	10.2
2001	5.5	5.5	5.2	6.1	7.6	6.8	6.4	7.3	7.7	7.6	6.9	8.0	8.0	7.8	8.6
2002	4.5	4.4	4.1	5.0	6.4	5.5	5.1	5.9	6.2	6.0	5.3	6.3	6.2	5.9	6.6
2003	5.1	5.0	4.7	5.6	7.0	6.2	5.8	6.6	6.9	6.8	6.1	7.1	7.1	6.8	7.5
2004	5.1	5.0	4.8	5.6	6.9	6.2	5.8	6.6	6.9	6.7	6.1	7.1	7.0	6.8	7.4
2005	5.0	4.9	4.6	5.4	6.7	6.0	5.6	6.3	6.6	6.5	5.8	6.8	6.7	6.5	7.0
2006	5.2	5.1	4.8	5.6	6.9	6.1	5.8	6.5	6.8	6.7	6.1	7.0	6.9	6.7	7.2
2007	5.0	4.9	4.7	5.5	6.7	6.0	5.6	6.3	6.6	6.4	5.9	6.7	6.7	6.4	6.9
2008	3.8	3.7	3.4	4.1	5.2	4.5	4.2	4.8	5.0	4.8	4.2	4.9	4.8	4.5	4.9

*Standard and Poor's 500 index total returns minus long-term government bond income returns.

Long-Horizon Equity Risk Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-1

End Date	Start Date 1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1971															
1972															
1973															
1974															
1975															
1976															
1977															
1978															
1979															
1980															
1981															
1982															
1983															
1984															
1985															
1986	9.7														
1987	3.5	-2.7													
1988	4.9	2.5	7.6												
1989	9.4	9.3	15.3	22.9											
1990	5.2	4.1	6.4	5.8	-11.3										
1991	8.1	7.8	10.4	11.3	5.5	22.2									
1992	7.0	6.5	8.4	8.5	3.8	11.3	0.4								
1993	6.5	6.0	7.5	7.4	3.6	8.5	1.6	2.9							
1994	5.2	4.6	5.6	5.3	1.8	5.1	-0.7	-1.2	-5.3						
1995	7.6	7.4	8.7	8.8	6.5	10.0	7.0	9.2	12.4	30.0					
1996	8.5	8.4	9.6	9.8	8.0	11.2	9.0	11.1	13.8	23.4	16.8				
1997	10.0	10.0	11.3	11.7	10.3	13.4	11.9	14.2	17.1	24.5	21.8	26.7			
1998	11.0	11.1	12.3	12.8	11.7	14.6	13.5	15.6	18.2	24.1	22.1	24.7	22.7		
1999	11.3	11.4	12.6	13.0	12.1	14.7	13.7	15.6	17.7	22.3	20.4	21.6	19.1	15.5	
2000	9.5	9.5	10.4	10.7	9.5	11.6	10.5	11.7	13.0	16.0	13.2	12.3	7.5	-0.1	-15.6
2001	7.8	7.7	8.4	8.5	7.3	9.0	7.7	8.5	9.2	11.2	8.1	6.4	1.3	-5.8	-16.5
2002	5.7	5.5	6.0	5.9	4.6	5.9	4.5	4.9	5.1	6.4	3.0	0.7	-4.5	-11.3	-20.2
2003	6.7	6.6	7.1	7.1	6.0	7.3	6.1	6.6	7.0	8.3	5.6	4.0	0.2	-4.3	-9.2
2004	6.7	6.5	7.1	7.0	6.0	7.2	6.1	6.5	6.9	8.1	5.6	4.2	1.0	-2.6	-6.2
2005	6.4	6.2	6.7	6.6	5.6	6.7	5.6	6.0	6.3	7.4	5.1	3.8	0.9	-2.2	-5.1
2006	6.6	6.4	6.9	6.9	5.9	7.0	6.0	6.4	6.7	7.7	5.6	4.5	2.1	-0.5	-2.8
2007	6.3	6.2	6.6	6.6	5.6	6.6	5.7	6.0	6.2	7.1	5.2	4.2	1.9	-0.4	-2.4
2008	4.2	4.0	4.3	4.2	3.2	4.0	2.9	3.1	3.1	3.7	1.6	0.4	-2.0	-4.5	-6.7

*Standard and Poor's 500 index total returns minus long-term government bond income returns.

Long-Horizon Equity Risk Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-1

End	Start Date							
Date	2001	2002	2003	2004	2005	2006	2007	2008
1971								
1972								
1973								
1974								
1975								
1976								
1977								
1978								
1979								
1980								
1981								
1982								
1983								
1984								
1985								
1986								
1987								
1988								
1989								
1990								
1991								
1992								
1993								
1994								
1995								
1996								
1997								
1998								
1999								
2000								
2001	-17.4							
2002	-22.6	-27.7						
2003	-7.1	-1.9	23.9					
2004	-3.8	0.7	14.9	5.9				
2005	-3.0	0.6	10.0	3.0	0.2			
2006	-0.7	2.7	10.3	5.7	5.7	11.1		
2007	-0.5	2.3	8.3	4.5	4.0	5.9	0.6	
2008	-5.6	-3.9	0.0	-4.7	-7.4	-9.9	-20.4	-0.4

*Standard and Poor's 500 index total returns minus long-term government bond income returns.

Intermediate-Horizon Equity Risk Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-2

End Date	Start Date 1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
1926	7.8														
1927	20.9	34.0													
1928	27.3	37.0	40.0												
1929	17.3	20.5	13.7	-12.5											
1930	8.2	8.3	-0.2	-20.3	-28.2										
1931	-0.9	-2.6	-11.8	-29.1	-37.3	-46.5									
1932	-2.5	-4.2	-11.8	-24.7	-28.8	-29.2	-11.8								
1933	4.2	3.7	-1.3	-9.6	-8.8	-2.4	19.7	51.2							
1934	3.3	2.7	-1.7	-8.7	-7.9	-2.9	11.7	23.4	-4.4						
1935	7.5	7.5	4.2	-0.9	1.0	6.8	20.2	30.8	20.6	45.6					
1936	9.8	10.0	7.3	3.2	5.5	11.1	22.6	31.2	24.6	39.1	32.5				
1937	5.9	5.8	2.9	-1.2	0.2	4.3	12.8	17.7	9.3	13.9	-2.0	-36.5			
1938	7.7	7.7	5.3	1.9	3.5	7.4	15.1	19.6	13.3	17.7	8.4	-3.6	29.3		
1939	7.1	7.0	4.7	1.5	2.9	6.4	13.0	16.6	10.8	13.8	5.9	-3.0	13.8	-1.7	
1940	5.9	5.7	3.6	0.5	1.7	4.7	10.4	13.2	7.7	9.8	2.6	-4.9	5.6	-6.2	-10.7
1941	4.7	4.5	2.4	-0.5	0.5	3.2	8.1	10.3	5.2	6.6	0.1	-6.4	1.2	-8.2	-11.5
1942	5.6	5.5	3.6	1.0	2.0	4.5	9.2	11.3	6.8	8.2	2.9	-2.0	4.8	-1.3	-1.1
1943	6.7	6.6	4.9	2.5	3.6	6.0	10.4	12.5	8.6	10.0	5.6	1.7	8.1	3.8	5.2
1944	7.3	7.2	5.7	3.5	4.6	6.9	11.0	12.9	9.5	10.8	7.0	3.8	9.6	6.3	7.9
1945	8.7	8.7	7.3	5.4	6.5	8.8	12.8	14.7	11.6	13.1	9.8	7.3	12.8	10.4	12.4
1946	7.8	7.8	6.4	4.6	5.6	7.7	11.3	13.0	10.0	11.2	8.1	5.6	10.3	8.0	9.3
1947	7.7	7.7	6.3	4.6	5.5	7.5	10.9	12.4	9.6	10.7	7.8	5.5	9.7	7.6	8.7
1948	7.5	7.5	6.2	4.5	5.4	7.3	10.5	11.9	9.2	10.2	7.5	5.4	9.2	7.2	8.2
1949	7.9	7.9	6.7	5.2	6.0	7.8	10.9	12.2	9.8	10.7	8.2	6.3	9.9	8.1	9.1
1950	8.8	8.9	7.8	6.3	7.2	9.0	11.9	13.2	11.0	11.9	9.7	8.0	11.5	10.0	11.1
1951	9.3	9.4	8.4	7.0	7.9	9.6	12.4	13.7	11.6	12.5	10.4	9.0	12.2	10.9	12.0
1952	9.6	9.6	8.7	7.4	8.2	9.9	12.6	13.8	11.8	12.7	10.8	9.4	12.5	11.3	12.3
1953	9.1	9.2	8.2	6.9	7.7	9.3	11.8	13.0	11.1	11.9	10.0	8.7	11.5	10.3	11.2
1954	10.6	10.7	9.8	8.6	9.5	11.0	13.5	14.7	13.0	13.8	12.1	11.0	13.8	12.8	13.8
1955	11.2	11.3	10.5	9.4	10.2	11.8	14.2	15.3	13.7	14.6	13.0	12.0	14.7	13.8	14.8
1956	10.9	11.0	10.2	9.2	10.0	11.4	13.8	14.8	13.2	14.0	12.5	11.5	14.1	13.2	14.1
1957	10.1	10.2	9.4	8.4	9.1	10.5	12.7	13.7	12.1	12.8	11.3	10.3	12.7	11.8	12.5
1958	11.1	11.2	10.4	9.4	10.2	11.6	13.7	14.7	13.2	14.0	12.6	11.7	14.0	13.2	14.0
1959	11.0	11.1	10.3	9.4	10.1	11.4	13.5	14.4	13.0	13.7	12.4	11.5	13.7	13.0	13.7
1960	10.5	10.6	9.9	9.0	9.7	10.9	12.9	13.8	12.4	13.0	11.7	10.9	12.9	12.2	12.9
1961	10.9	11.0	10.3	9.4	10.1	11.3	13.3	14.1	12.8	13.4	12.2	11.4	13.4	12.7	13.3
1962	10.3	10.3	9.7	8.8	9.4	10.6	12.4	13.2	11.9	12.5	11.3	10.5	12.3	11.6	12.2
1963	10.5	10.6	9.9	9.1	9.7	10.8	12.6	13.4	12.2	12.7	11.6	10.8	12.6	11.9	12.5
1964	10.5	10.6	10.0	9.2	9.8	10.9	12.6	13.4	12.2	12.7	11.6	10.8	12.6	12.0	12.5
1965	10.5	10.6	9.9	9.1	9.7	10.8	12.5	13.2	12.1	12.6	11.5	10.8	12.4	11.8	12.3
1966	9.9	9.9	9.3	8.5	9.1	10.1	11.7	12.4	11.2	11.7	10.6	9.9	11.5	10.9	11.3
1967	10.1	10.1	9.5	8.8	9.3	10.3	11.9	12.6	11.5	11.9	10.9	10.2	11.7	11.1	11.6
1968	10.0	10.0	9.4	8.7	9.2	10.2	11.7	12.4	11.3	11.8	10.7	10.0	11.6	11.0	11.4
1969	9.4	9.4	8.9	8.1	8.6	9.6	11.0	11.7	10.6	11.0	10.0	9.3	10.7	10.1	10.5
1970	9.1	9.2	8.6	7.8	8.3	9.2	10.7	11.3	10.2	10.6	9.6	8.9	10.3	9.7	10.1

*Standard and Poor's 500 index total returns minus intermediate-term government bond income returns.

Intermediate-Horizon Equity Risk Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-2

End	Start Date														
Date	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
1971	9.1	9.1	8.6	7.8	8.3	9.2	10.6	11.2	10.1	10.5	9.5	8.9	10.2	9.7	10.0
1972	9.2	9.2	8.7	8.0	8.4	9.3	10.7	11.2	10.2	10.6	9.6	9.0	10.3	9.8	10.1
1973	8.6	8.6	8.0	7.3	7.8	8.6	9.9	10.4	9.4	9.8	8.8	8.2	9.4	8.9	9.2
1974	7.7	7.7	7.1	6.4	6.8	7.6	8.9	9.4	8.4	8.7	7.7	7.1	8.3	7.7	8.0
1975	8.1	8.1	7.6	6.9	7.3	8.1	9.4	9.9	8.9	9.2	8.3	7.7	8.8	8.3	8.6
1976	8.3	8.3	7.8	7.1	7.5	8.3	9.5	10.0	9.1	9.4	8.5	7.9	9.0	8.5	8.8
1977	7.9	7.9	7.4	6.7	7.1	7.9	9.0	9.5	8.6	8.9	8.0	7.4	8.5	7.9	8.2
1978	7.7	7.7	7.2	6.5	6.9	7.7	8.8	9.3	8.3	8.6	7.8	7.2	8.2	7.7	8.0
1979	7.8	7.8	7.2	6.6	7.0	7.7	8.8	9.3	8.4	8.6	7.8	7.2	8.3	7.8	8.0
1980	8.0	8.0	7.5	6.9	7.3	8.0	9.1	9.5	8.7	8.9	8.1	7.6	8.6	8.1	8.3
1981	7.5	7.5	7.1	6.4	6.8	7.5	8.6	9.0	8.1	8.4	7.6	7.0	8.0	7.5	7.7
1982	7.6	7.6	7.1	6.5	6.8	7.5	8.6	9.0	8.1	8.4	7.6	7.0	8.0	7.5	7.7
1983	7.6	7.6	7.2	6.6	6.9	7.6	8.6	9.0	8.2	8.5	7.7	7.1	8.1	7.6	7.8
1984	7.4	7.4	7.0	6.4	6.7	7.4	8.4	8.8	7.9	8.2	7.4	6.9	7.8	7.3	7.5
1985	7.7	7.7	7.2	6.6	7.0	7.6	8.6	9.0	8.2	8.4	7.7	7.2	8.1	7.6	7.8
1986	7.7	7.7	7.3	6.7	7.0	7.7	8.7	9.0	8.2	8.5	7.8	7.3	8.2	7.7	7.9
1987	7.6	7.6	7.1	6.6	6.9	7.5	8.5	8.8	8.0	8.3	7.6	7.1	7.9	7.5	7.7
1988	7.6	7.6	7.1	6.6	6.9	7.5	8.5	8.8	8.1	8.3	7.6	7.1	8.0	7.5	7.7
1989	7.8	7.8	7.4	6.9	7.2	7.8	8.7	9.1	8.3	8.6	7.9	7.4	8.2	7.8	8.0
1990	7.5	7.5	7.1	6.6	6.9	7.5	8.4	8.7	8.0	8.2	7.5	7.1	7.9	7.5	7.6
1991	7.8	7.8	7.3	6.8	7.1	7.7	8.6	9.0	8.2	8.5	7.8	7.3	8.2	7.8	7.9
1992	7.7	7.7	7.3	6.7	7.0	7.6	8.5	8.8	8.1	8.3	7.7	7.2	8.0	7.6	7.8
1993	7.6	7.6	7.2	6.7	7.0	7.6	8.4	8.8	8.1	8.3	7.6	7.2	8.0	7.6	7.8
1994	7.4	7.4	7.0	6.5	6.8	7.4	8.2	8.6	7.9	8.1	7.4	7.0	7.7	7.4	7.5
1995	7.8	7.8	7.4	6.9	7.2	7.7	8.6	8.9	8.2	8.4	7.8	7.4	8.1	7.8	7.9
1996	7.9	7.9	7.5	7.0	7.3	7.9	8.7	9.0	8.4	8.6	8.0	7.6	8.3	7.9	8.1
1997	8.2	8.2	7.8	7.3	7.6	8.2	9.0	9.3	8.7	8.9	8.3	7.9	8.6	8.3	8.4
1998	8.4	8.4	8.0	7.6	7.9	8.4	9.2	9.5	8.9	9.1	8.5	8.1	8.9	8.5	8.7
1999	8.5	8.5	8.1	7.7	8.0	8.5	9.3	9.6	9.0	9.2	8.6	8.2	9.0	8.6	8.8
2000	8.2	8.2	7.8	7.4	7.6	8.2	8.9	9.3	8.6	8.8	8.3	7.9	8.6	8.2	8.4
2001	7.8	7.8	7.5	7.0	7.3	7.8	8.6	8.9	8.3	8.5	7.9	7.5	8.2	7.9	8.0
2002	7.4	7.4	7.0	6.6	6.9	7.3	8.1	8.4	7.8	7.9	7.4	7.0	7.7	7.3	7.5
2003	7.6	7.6	7.3	6.8	7.1	7.6	8.3	8.6	8.0	8.2	7.7	7.3	7.9	7.6	7.8
2004	7.6	7.6	7.3	6.9	7.1	7.6	8.3	8.6	8.0	8.2	7.7	7.3	7.9	7.6	7.8
2005	7.6	7.5	7.2	6.8	7.0	7.5	8.2	8.5	7.9	8.1	7.6	7.2	7.8	7.5	7.7
2006	7.6	7.6	7.3	6.8	7.1	7.6	8.3	8.5	8.0	8.1	7.6	7.3	7.9	7.6	7.7
2007	7.5	7.5	7.2	6.8	7.0	7.5	8.2	8.4	7.9	8.0	7.5	7.2	7.8	7.5	7.6
2008	6.9	6.9	6.6	6.2	6.4	6.9	7.6	7.8	7.2	7.4	6.9	6.5	7.1	6.8	6.9

*Standard and Poor's 500 index total returns minus intermediate-term government bond income returns.

Intermediate-Horizon Equity Risk Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-2

End	Start Date														
Date	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
1926															
1927															
1928															
1929															
1930															
1931															
1932															
1933															
1934															
1935															
1936															
1937															
1938															
1939															
1940															
1941	-12.3														
1942	3.7	19.6													
1943	10.6	22.0	24.3												
1944	12.5	20.7	21.3	18.3											
1945	17.0	24.4	26.0	26.8	35.2										
1946	12.7	17.7	17.2	14.8	13.0	-9.2									
1947	11.5	15.5	14.6	12.2	10.2	-2.3	4.5								
1948	10.6	13.8	12.9	10.6	8.6	-0.2	4.2	3.9							
1949	11.3	14.3	13.5	11.7	10.4	4.2	8.6	10.7	17.4						
1950	13.2	16.1	15.6	14.4	13.7	9.4	14.0	17.2	23.9	30.3					
1951	14.0	16.7	16.3	15.3	14.9	11.5	15.6	18.4	23.3	26.2	22.0				
1952	14.2	16.6	16.3	15.4	15.1	12.2	15.7	18.0	21.5	22.8	19.1	16.2			
1953	12.8	14.9	14.5	13.5	13.0	10.2	13.0	14.4	16.5	16.2	11.6	6.3	-3.5		
1954	15.6	17.7	17.6	16.9	16.8	14.7	17.7	19.6	22.2	23.2	21.4	21.2	23.7	51.0	
1955	16.5	18.5	18.4	18.0	17.9	16.2	19.0	20.8	23.2	24.2	23.0	23.2	25.5	40.1	29.1
1956	15.7	17.5	17.4	16.8	16.7	15.0	17.4	18.9	20.8	21.2	19.7	19.3	20.0	27.9	16.3
1957	13.9	15.5	15.3	14.6	14.3	12.6	14.6	15.6	16.9	16.8	14.8	13.7	13.1	17.3	6.1
1958	15.4	17.0	16.8	16.3	16.2	14.7	16.7	17.8	19.2	19.4	18.0	17.5	17.7	21.9	14.7
1959	15.0	16.5	16.3	15.8	15.6	14.2	16.0	17.0	18.2	18.2	16.9	16.3	16.3	19.6	13.3
1960	14.0	15.4	15.2	14.7	14.4	13.0	14.6	15.4	16.4	16.3	14.8	14.0	13.8	16.3	10.5
1961	14.5	15.8	15.6	15.1	14.9	13.7	15.2	16.0	16.9	16.8	15.6	15.0	14.8	17.1	12.3
1962	13.3	14.5	14.2	13.7	13.4	12.1	13.5	14.1	14.8	14.6	13.3	12.5	12.1	13.9	9.2
1963	13.5	14.7	14.4	14.0	13.7	12.5	13.8	14.4	15.1	14.9	13.7	13.0	12.7	14.4	10.3
1964	13.5	14.6	14.4	13.9	13.7	12.5	13.7	14.3	14.9	14.7	13.6	13.0	12.7	14.2	10.5
1965	13.3	14.3	14.1	13.6	13.4	12.3	13.4	13.9	14.5	14.3	13.3	12.7	12.4	13.7	10.3
1966	12.2	13.1	12.9	12.4	12.1	11.0	12.0	12.4	12.9	12.6	11.5	10.8	10.4	11.5	8.2
1967	12.4	13.4	13.1	12.7	12.4	11.4	12.4	12.8	13.2	13.0	12.0	11.3	11.0	12.0	9.0
1968	12.2	13.1	12.8	12.4	12.1	11.1	12.0	12.4	12.8	12.6	11.6	11.0	10.7	11.6	8.8
1969	11.2	12.1	11.8	11.3	11.0	10.0	10.9	11.2	11.5	11.2	10.2	9.5	9.1	9.9	7.2
1970	10.7	11.5	11.3	10.8	10.5	9.5	10.3	10.5	10.8	10.5	9.5	8.8	8.4	9.1	6.5

*Standard and Poor's 500 index total returns minus intermediate-term government bond income returns.

Intermediate-Horizon Equity Risk Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-2

End Date	Start Date 1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
1971	10.7	11.4	11.2	10.7	10.4	9.5	10.2	10.4	10.7	10.4	9.5	8.8	8.4	9.1	6.6
1972	10.8	11.5	11.2	10.8	10.5	9.6	10.3	10.5	10.8	10.5	9.6	9.0	8.7	9.3	7.0
1973	9.8	10.5	10.2	9.7	9.4	8.5	9.1	9.3	9.5	9.2	8.3	7.7	7.3	7.8	5.5
1974	8.5	9.1	8.8	8.3	8.0	7.0	7.6	7.7	7.9	7.5	6.5	5.9	5.4	5.8	3.6
1975	9.1	9.7	9.4	9.0	8.7	7.8	8.4	8.5	8.7	8.4	7.5	6.9	6.5	6.9	4.8
1976	9.3	9.9	9.7	9.2	8.9	8.1	8.7	8.8	9.0	8.7	7.8	7.3	6.9	7.3	5.4
1977	8.7	9.3	9.0	8.5	8.3	7.4	7.9	8.1	8.2	7.9	7.0	6.5	6.1	6.5	4.5
1978	8.4	9.0	8.7	8.3	8.0	7.1	7.7	7.8	7.9	7.6	6.7	6.2	5.8	6.2	4.3
1979	8.5	9.0	8.7	8.3	8.0	7.2	7.7	7.8	7.9	7.6	6.8	6.3	5.9	6.3	4.5
1980	8.8	9.4	9.1	8.7	8.4	7.6	8.1	8.2	8.4	8.1	7.3	6.8	6.5	6.9	5.2
1981	8.2	8.7	8.4	8.0	7.7	6.9	7.4	7.5	7.6	7.3	6.5	6.0	5.7	6.0	4.3
1982	8.2	8.7	8.4	8.0	7.7	7.0	7.4	7.5	7.6	7.3	6.6	6.1	5.8	6.1	4.5
1983	8.3	8.8	8.5	8.1	7.8	7.1	7.6	7.6	7.7	7.5	6.8	6.3	6.0	6.3	4.7
1984	8.0	8.4	8.2	7.8	7.5	6.8	7.2	7.3	7.4	7.1	6.4	5.9	5.6	5.9	4.4
1985	8.3	8.7	8.5	8.1	7.8	7.2	7.6	7.7	7.8	7.5	6.8	6.4	6.1	6.4	5.0
1986	8.3	8.8	8.5	8.2	7.9	7.3	7.7	7.7	7.8	7.6	7.0	6.5	6.2	6.5	5.1
1987	8.1	8.5	8.3	7.9	7.7	7.0	7.4	7.5	7.6	7.3	6.7	6.3	6.0	6.3	4.9
1988	8.1	8.5	8.3	7.9	7.7	7.1	7.4	7.5	7.6	7.4	6.7	6.3	6.1	6.3	5.0
1989	8.4	8.8	8.6	8.3	8.0	7.4	7.8	7.9	8.0	7.7	7.2	6.8	6.5	6.8	5.5
1990	8.0	8.4	8.2	7.9	7.6	7.0	7.4	7.4	7.5	7.3	6.7	6.3	6.1	6.3	5.1
1991	8.3	8.7	8.5	8.2	8.0	7.4	7.7	7.8	7.9	7.7	7.1	6.7	6.5	6.8	5.6
1992	8.2	8.6	8.4	8.0	7.8	7.2	7.6	7.7	7.7	7.5	7.0	6.6	6.4	6.6	5.4
1993	8.1	8.5	8.3	8.0	7.7	7.2	7.5	7.6	7.7	7.4	6.9	6.6	6.3	6.6	5.4
1994	7.9	8.2	8.0	7.7	7.5	6.9	7.3	7.3	7.4	7.2	6.6	6.3	6.1	6.3	5.2
1995	8.3	8.7	8.5	8.2	8.0	7.4	7.7	7.8	7.9	7.7	7.2	6.9	6.6	6.9	5.8
1996	8.4	8.8	8.6	8.3	8.1	7.6	7.9	8.0	8.1	7.9	7.4	7.1	6.9	7.1	6.1
1997	8.8	9.1	9.0	8.7	8.5	8.0	8.3	8.4	8.5	8.3	7.8	7.5	7.3	7.6	6.6
1998	9.0	9.4	9.2	8.9	8.8	8.3	8.6	8.7	8.8	8.6	8.1	7.9	7.7	7.9	6.9
1999	9.1	9.5	9.3	9.1	8.9	8.4	8.7	8.8	8.9	8.7	8.3	8.0	7.8	8.1	7.1
2000	8.7	9.1	8.9	8.6	8.5	8.0	8.3	8.4	8.4	8.3	7.8	7.5	7.4	7.6	6.6
2001	8.3	8.7	8.5	8.2	8.0	7.5	7.8	7.9	8.0	7.8	7.4	7.1	6.9	7.1	6.2
2002	7.8	8.1	7.9	7.6	7.4	7.0	7.2	7.3	7.4	7.2	6.7	6.4	6.2	6.4	5.5
2003	8.1	8.4	8.2	7.9	7.8	7.3	7.6	7.6	7.7	7.5	7.1	6.8	6.6	6.8	5.9
2004	8.0	8.4	8.2	7.9	7.8	7.3	7.6	7.6	7.7	7.5	7.1	6.8	6.6	6.8	5.9
2005	7.9	8.3	8.1	7.8	7.6	7.2	7.5	7.5	7.6	7.4	7.0	6.7	6.5	6.7	5.8
2006	8.0	8.3	8.1	7.9	7.7	7.2	7.5	7.6	7.6	7.5	7.1	6.8	6.6	6.8	5.9
2007	7.9	8.2	8.0	7.8	7.6	7.1	7.4	7.5	7.5	7.4	6.9	6.7	6.5	6.7	5.9
2008	7.2	7.5	7.3	7.0	6.8	6.4	6.6	6.7	6.7	6.5	6.1	5.9	5.7	5.8	5.0

*Standard and Poor's 500 index total returns minus intermediate-term government bond income returns.

Intermediate-Horizon Equity Risk Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-2

End	Start Date														
Date	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
1926															
1927															
1928															
1929															
1930															
1931															
1932															
1933															
1934															
1935															
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1946															
1947															
1948															
1949															
1950															
1951															
1952															
1953															
1954															
1955															
1956	3.5														
1957	-5.4	-14.4													
1958	9.9	13.0	40.4												
1959	9.3	11.3	24.1	7.8											
1960	6.7	7.5	14.8	2.1	-3.7										
1961	9.5	10.7	17.0	9.2	9.8	23.3									
1962	6.4	6.8	11.1	3.7	2.4	5.4	-12.5								
1963	8.0	8.6	12.4	6.8	6.6	10.0	3.3	19.1							
1964	8.5	9.1	12.4	7.8	7.8	10.6	6.4	15.8	12.5						
1965	8.4	9.0	11.9	7.8	7.8	10.2	6.9	13.3	10.4	8.3					
1966	6.3	6.6	8.9	5.0	4.6	6.0	2.5	6.2	1.9	-3.3	-15.0				
1967	7.4	7.7	9.9	6.6	6.4	7.8	5.3	8.8	6.2	4.1	2.1	19.1			
1968	7.2	7.5	9.5	6.5	6.3	7.6	5.3	8.3	6.1	4.5	3.2	12.3	5.6		
1969	5.6	5.8	7.5	4.5	4.2	5.0	2.7	4.9	2.6	0.6	-1.4	3.2	-4.8	-15.2	
1970	5.0	5.1	6.6	3.8	3.5	4.2	2.0	3.8	1.7	-0.1	-1.8	1.5	-4.4	-9.4	-3.6

*Standard and Poor's 500 index total returns minus intermediate-term government bond income returns.

Intermediate-Horizon Equity Risk Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-2

End	Start Date														
Date	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
1971	5.2	5.4	6.8	4.2	3.9	4.6	2.7	4.4	2.5	1.1	-0.1	2.9	-1.2	-3.4	2.5
1972	5.7	5.9	7.2	4.8	4.6	5.3	3.6	5.3	3.7	2.6	1.8	4.6	1.7	0.8	6.1
1973	4.2	4.3	5.4	3.1	2.8	3.2	1.6	2.8	1.2	0.0	-1.1	0.9	-2.1	-3.6	-0.8
1974	2.2	2.1	3.1	0.8	0.3	0.6	-1.1	-0.2	-2.0	-3.4	-4.7	-3.4	-6.6	-8.7	-7.4
1975	3.6	3.6	4.6	2.5	2.2	2.6	1.1	2.1	0.7	-0.4	-1.2	0.3	-2.1	-3.2	-1.2
1976	4.2	4.3	5.2	3.3	3.0	3.4	2.1	3.2	1.9	1.1	0.4	1.9	0.0	-0.7	1.4
1977	3.4	3.4	4.3	2.4	2.1	2.4	1.1	2.0	0.8	-0.1	-0.8	0.5	-1.3	-2.1	-0.5
1978	3.2	3.2	4.0	2.2	1.9	2.2	1.0	1.8	0.7	-0.2	-0.8	0.4	-1.3	-2.0	-0.6
1979	3.5	3.5	4.3	2.6	2.3	2.6	1.5	2.3	1.2	0.5	-0.1	1.1	-0.4	-1.0	0.5
1980	4.2	4.2	5.1	3.4	3.2	3.6	2.5	3.4	2.5	1.8	1.4	2.6	1.3	0.9	2.4
1981	3.4	3.4	4.1	2.5	2.3	2.6	1.5	2.3	1.3	0.7	0.2	1.2	-0.1	-0.5	0.7
1982	3.6	3.6	4.3	2.8	2.6	2.8	1.9	2.6	1.7	1.1	0.7	1.7	0.5	0.2	1.3
1983	3.9	3.9	4.6	3.2	3.0	3.3	2.3	3.0	2.2	1.7	1.3	2.3	1.2	1.0	2.1
1984	3.6	3.6	4.2	2.8	2.6	2.9	2.0	2.7	1.9	1.3	1.0	1.9	0.9	0.6	1.6
1985	4.2	4.2	4.8	3.5	3.4	3.6	2.8	3.5	2.8	2.3	2.0	2.9	2.0	1.8	2.8
1986	4.4	4.4	5.0	3.8	3.6	3.9	3.1	3.8	3.1	2.7	2.4	3.3	2.5	2.3	3.3
1987	4.2	4.2	4.8	3.6	3.4	3.7	2.9	3.5	2.9	2.5	2.2	3.0	2.2	2.1	3.0
1988	4.3	4.3	4.9	3.7	3.6	3.9	3.1	3.7	3.1	2.7	2.5	3.3	2.5	2.4	3.3
1989	4.8	4.9	5.5	4.4	4.3	4.5	3.9	4.5	3.9	3.5	3.4	4.1	3.5	3.4	4.3
1990	4.4	4.4	5.0	3.9	3.7	4.0	3.3	3.9	3.3	3.0	2.8	3.5	2.8	2.7	3.6
1991	4.9	4.9	5.5	4.5	4.4	4.6	4.0	4.6	4.0	3.7	3.5	4.3	3.7	3.6	4.4
1992	4.8	4.8	5.4	4.4	4.3	4.5	3.9	4.4	3.9	3.6	3.5	4.2	3.6	3.5	4.3
1993	4.8	4.8	5.4	4.4	4.3	4.5	3.9	4.5	4.0	3.7	3.5	4.2	3.6	3.5	4.3
1994	4.6	4.6	5.1	4.1	4.0	4.2	3.7	4.2	3.7	3.4	3.2	3.9	3.3	3.2	4.0
1995	5.2	5.3	5.8	4.8	4.8	5.0	4.5	5.0	4.5	4.3	4.1	4.8	4.3	4.2	5.0
1996	5.5	5.6	6.1	5.2	5.1	5.3	4.8	5.3	4.9	4.7	4.6	5.2	4.7	4.7	5.4
1997	6.0	6.1	6.6	5.7	5.7	5.9	5.4	6.0	5.6	5.4	5.3	5.9	5.5	5.5	6.2
1998	6.4	6.5	7.0	6.2	6.1	6.4	5.9	6.4	6.1	5.9	5.8	6.5	6.1	6.1	6.8
1999	6.6	6.7	7.2	6.4	6.4	6.6	6.2	6.7	6.3	6.2	6.1	6.7	6.4	6.4	7.1
2000	6.2	6.2	6.7	5.9	5.8	6.1	5.6	6.1	5.8	5.6	5.5	6.1	5.7	5.7	6.4
2001	5.7	5.7	6.2	5.4	5.3	5.5	5.1	5.5	5.2	5.0	4.9	5.5	5.1	5.0	5.7
2002	5.0	5.0	5.5	4.7	4.6	4.8	4.3	4.7	4.4	4.2	4.1	4.6	4.2	4.1	4.7
2003	5.4	5.5	5.9	5.1	5.1	5.3	4.8	5.3	4.9	4.7	4.6	5.2	4.8	4.8	5.3
2004	5.5	5.5	5.9	5.2	5.1	5.3	4.9	5.3	5.0	4.8	4.7	5.2	4.8	4.8	5.4
2005	5.4	5.4	5.8	5.1	5.0	5.2	4.8	5.2	4.9	4.7	4.6	5.1	4.7	4.7	5.3
2006	5.5	5.5	5.9	5.2	5.2	5.4	5.0	5.4	5.0	4.9	4.8	5.3	4.9	4.9	5.4
2007	5.4	5.4	5.8	5.1	5.1	5.3	4.9	5.3	4.9	4.8	4.7	5.2	4.8	4.8	5.3
2008	4.6	4.6	4.9	4.2	4.2	4.3	3.9	4.3	3.9	3.8	3.6	4.1	3.7	3.7	4.2

*Standard and Poor's 500 index total returns minus intermediate-term government bond income returns.

Intermediate-Horizon Equity Risk Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-2

End Date	Start Date 1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
1971	8.6														
1972	10.9	13.2													
1973	0.2	-4.0	-21.3												
1974	-8.3	-13.9	-27.5	-33.7											
1975	-0.7	-3.0	-8.4	-1.9	29.9										
1976	2.3	1.0	-2.1	4.3	23.3	16.8									
1977	0.0	-1.4	-4.4	-0.2	11.0	1.6	-13.7								
1978	-0.2	-1.4	-3.9	-0.4	7.9	0.6	-7.5	-1.3							
1979	0.9	0.0	-1.9	1.3	8.3	2.9	-1.8	4.2	9.6						
1980	3.0	2.4	1.0	4.2	10.6	6.7	4.2	10.1	15.8	22.0					
1981	1.1	0.4	-1.1	1.5	6.5	2.6	-0.3	3.1	4.5	2.0	-17.9				
1982	1.7	1.1	-0.1	2.3	6.8	3.5	1.2	4.2	5.6	4.3	-4.6	8.7			
1983	2.6	2.1	1.0	3.3	7.4	4.6	2.8	5.6	6.9	6.2	1.0	10.5	12.2		
1984	2.0	1.5	0.5	2.5	6.1	3.5	1.8	4.0	4.9	3.9	-0.6	5.2	3.4	-5.4	
1985	3.3	2.9	2.1	4.1	7.5	5.3	4.0	6.2	7.2	6.8	3.8	9.2	9.4	8.0	21.4
1986	3.8	3.4	2.7	4.6	7.8	5.8	4.7	6.7	7.7	7.4	5.0	9.6	9.8	9.0	16.2
1987	3.4	3.1	2.4	4.1	7.0	5.1	4.0	5.8	6.6	6.2	4.0	7.6	7.4	6.2	10.1
1988	3.7	3.4	2.8	4.4	7.1	5.4	4.4	6.0	6.8	6.5	4.5	7.7	7.6	6.6	9.6
1989	4.7	4.5	4.0	5.6	8.2	6.6	5.8	7.5	8.3	8.1	6.6	9.7	9.8	9.4	12.4
1990	3.9	3.7	3.1	4.6	7.0	5.4	4.6	6.0	6.6	6.4	4.8	7.3	7.2	6.4	8.4
1991	4.8	4.6	4.2	5.6	7.9	6.5	5.9	7.2	7.9	7.8	6.5	8.9	8.9	8.5	10.5
1992	4.7	4.5	4.0	5.4	7.5	6.2	5.6	6.9	7.4	7.3	6.0	8.2	8.2	7.7	9.4
1993	4.7	4.5	4.1	5.3	7.4	6.1	5.5	6.7	7.2	7.1	5.9	7.9	7.8	7.4	8.8
1994	4.3	4.1	3.7	4.9	6.8	5.6	4.9	6.0	6.5	6.3	5.2	6.9	6.8	6.3	7.5
1995	5.3	5.2	4.8	6.0	7.9	6.8	6.3	7.4	7.9	7.8	6.9	8.7	8.6	8.3	9.6
1996	5.8	5.7	5.4	6.5	8.3	7.3	6.8	7.9	8.4	8.4	7.5	9.2	9.3	9.0	10.2
1997	6.6	6.5	6.2	7.4	9.2	8.2	7.8	8.9	9.4	9.4	8.7	10.3	10.4	10.3	11.5
1998	7.2	7.1	6.9	8.0	9.8	8.9	8.5	9.6	10.1	10.1	9.5	11.1	11.3	11.2	12.4
1999	7.5	7.4	7.2	8.3	10.0	9.2	8.8	9.9	10.4	10.4	9.8	11.4	11.5	11.5	12.6
2000	6.7	6.7	6.4	7.4	9.0	8.2	7.8	8.8	9.2	9.2	8.6	10.0	10.0	9.9	10.9
2001	6.0	5.9	5.6	6.6	8.1	7.3	6.9	7.7	8.1	8.1	7.4	8.7	8.6	8.5	9.3
2002	5.0	4.9	4.6	5.5	6.9	6.0	5.6	6.4	6.7	6.6	5.9	7.0	6.9	6.6	7.3
2003	5.6	5.5	5.3	6.2	7.5	6.7	6.4	7.1	7.5	7.4	6.7	7.9	7.8	7.6	8.3
2004	5.7	5.6	5.3	6.2	7.5	6.8	6.4	7.1	7.5	7.4	6.8	7.8	7.8	7.6	8.2
2005	5.5	5.4	5.2	6.0	7.3	6.6	6.2	6.9	7.2	7.1	6.5	7.6	7.5	7.3	7.9
2006	5.7	5.6	5.4	6.2	7.4	6.7	6.4	7.1	7.4	7.3	6.7	7.7	7.7	7.5	8.1
2007	5.6	5.5	5.3	6.0	7.2	6.5	6.2	6.9	7.1	7.1	6.5	7.5	7.4	7.2	7.7
2008	4.4	4.3	4.0	4.7	5.9	5.1	4.8	5.4	5.6	5.4	4.9	5.7	5.6	5.3	5.8

*Standard and Poor's 500 index total returns minus intermediate-term government bond income returns.

Intermediate-Horizon Equity Risk Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-2

End	Start Date														
Date	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1971															
1972															
1973															
1974															
1975															
1976															
1977															
1978															
1979															
1980															
1981															
1982															
1983															
1984															
1985															
1986	10.9														
1987	4.4	-2.2													
1988	5.7	3.1	8.4												
1989	10.1	9.8	15.8	23.2											
1990	5.8	4.5	6.8	6.0	-11.3										
1991	8.7	8.2	10.8	11.7	5.9	23.0									
1992	7.6	7.1	8.9	9.1	4.4	12.2	1.3								
1993	7.2	6.7	8.2	8.2	4.4	9.6	3.0	4.6							
1994	5.9	5.3	6.4	6.0	2.6	6.0	0.4	-0.1	-4.8						
1995	8.4	8.1	9.4	9.6	7.3	11.0	8.0	10.2	13.1	30.9					
1996	9.2	9.0	10.3	10.5	8.7	12.0	9.8	12.0	14.4	24.0	17.1				
1997	10.7	10.7	12.0	12.4	11.0	14.2	12.7	15.0	17.6	25.1	22.2	27.2			
1998	11.7	11.7	13.0	13.5	12.4	15.3	14.2	16.4	18.8	24.6	22.6	25.3	23.3		
1999	12.0	12.0	13.2	13.7	12.7	15.4	14.4	16.3	18.3	22.9	20.8	22.1	19.5	15.7	
2000	10.1	10.1	11.0	11.3	10.2	12.3	11.1	12.3	13.5	16.5	13.6	12.7	7.9	0.2	-15.3
2001	8.5	8.3	9.1	9.2	8.0	9.7	8.4	9.2	9.8	11.8	8.7	7.0	1.9	-5.2	-15.7
2002	6.5	6.2	6.8	6.6	5.4	6.7	5.3	5.7	5.8	7.1	3.7	1.5	-3.7	-10.4	-19.2
2003	7.5	7.3	7.9	7.9	6.8	8.2	7.0	7.5	7.8	9.2	6.5	4.9	1.2	-3.2	-7.9
2004	7.5	7.4	7.9	7.9	6.9	8.2	7.0	7.5	7.8	9.0	6.6	5.3	2.1	-1.4	-4.8
2005	7.2	7.0	7.5	7.5	6.5	7.7	6.6	7.0	7.2	8.3	6.0	4.8	2.0	-1.1	-3.9
2006	7.4	7.2	7.7	7.7	6.8	7.9	6.9	7.3	7.5	8.5	6.5	5.4	3.0	0.5	-1.7
2007	7.1	6.9	7.4	7.3	6.5	7.5	6.5	6.9	7.1	8.0	6.0	5.0	2.8	0.5	-1.3
2008	5.1	4.8	5.1	5.0	4.0	4.9	3.8	4.0	3.9	4.5	2.5	1.3	-1.1	-3.5	-5.6

*Standard and Poor's 500 index total returns minus intermediate-term government bond income returns.

Intermediate-Horizon Equity Risk Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-2

End	Start Date							
Date	2001	2002	2003	2004	2005	2006	2007	2008
1971								
1972								
1973								
1974								
1975								
1976								
1977								
1978								
1979								
1980								
1981								
1982								
1983								
1984								
1985								
1986								
1987								
1988								
1989								
1990								
1991								
1992								
1993								
1994								
1995								
1996								
1997								
1998								
1999								
2000								
2001	-16.2							
2002	-21.1	-26.1						
2003	-5.5	-0.1	25.8					
2004	-2.2	2.5	16.7	7.6				
2005	-1.6	2.1	11.5	4.3	1.0			
2006	0.6	3.9	11.4	6.6	6.1	11.3		
2007	0.6	3.4	9.3	5.2	4.4	6.2	1.1	
2008	-4.4	-2.8	1.1	-3.8	-6.7	-9.2	-19.5	-0.4

*Standard and Poor's 500 index total returns minus intermediate-term government bond income returns.

Short-Horizon Equity Risk Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-3

End	Start Date														
Date	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
1926	8.4														
1927	21.4	34.4													
1928	27.6	37.2	40.1												
1929	17.4	20.4	13.4	-13.2											
1930	8.5	8.5	-0.1	-20.2	-27.3										
1931	-0.4	-2.1	-11.2	-28.3	-35.9	-44.4									
1932	-1.6	-3.3	-10.8	-23.5	-27.0	-26.8	-9.2								
1933	5.3	4.9	0.0	-8.1	-6.8	0.0	22.3	53.7							
1934	4.5	4.1	-0.3	-7.0	-5.8	-0.4	14.3	26.0	-1.6						
1935	8.8	8.9	5.7	0.8	3.1	9.2	22.6	33.2	22.9	47.5					
1936	11.1	11.4	8.8	4.9	7.5	13.3	24.8	33.3	26.5	40.6	33.7				
1937	7.2	7.1	4.4	0.4	2.1	6.3	14.8	19.6	11.1	15.3	-0.8	-35.3			
1938	9.1	9.1	6.8	3.5	5.4	9.4	17.1	21.5	15.1	19.3	9.8	-2.1	31.1		
1939	8.4	8.4	6.2	3.2	4.8	8.3	14.9	18.4	12.5	15.3	7.3	-1.5	15.4	-0.4	
1940	7.2	7.1	5.0	2.1	3.5	6.5	12.2	14.9	9.3	11.1	3.9	-3.6	7.0	-5.1	-9.8
1941	6.0	5.8	3.8	1.0	2.2	4.9	9.8	11.9	6.7	7.9	1.3	-5.2	2.3	-7.3	-10.7
1942	6.8	6.7	4.9	2.4	3.6	6.1	10.7	12.7	8.2	9.4	4.0	-1.0	5.9	-0.4	-0.5
1943	7.9	7.8	6.2	3.9	5.1	7.6	12.0	13.9	9.9	11.2	6.7	2.8	9.1	4.8	6.0
1944	8.5	8.5	7.0	4.9	6.1	8.5	12.6	14.4	10.8	12.0	8.1	4.9	10.6	7.2	8.7
1945	9.9	9.9	8.6	6.7	8.0	10.3	14.2	16.0	12.9	14.2	10.9	8.3	13.8	11.3	13.3
1946	9.0	9.0	7.7	5.9	7.0	9.2	12.7	14.3	11.3	12.3	9.1	6.7	11.3	8.9	10.2
1947	8.8	8.8	7.6	5.9	6.9	8.9	12.3	13.7	10.8	11.8	8.8	6.5	10.7	8.5	9.6
1948	8.6	8.6	7.4	5.8	6.8	8.7	11.8	13.1	10.4	11.3	8.5	6.4	10.2	8.1	9.0
1949	9.0	9.0	7.9	6.4	7.3	9.2	12.1	13.4	10.9	11.7	9.1	7.2	10.8	8.9	9.9
1950	9.9	9.9	8.9	7.5	8.4	10.2	13.1	14.3	12.0	12.9	10.6	8.9	12.3	10.7	11.8
1951	10.4	10.4	9.4	8.1	9.1	10.8	13.6	14.8	12.6	13.4	11.3	9.8	13.0	11.7	12.7
1952	10.6	10.7	9.7	8.5	9.4	11.1	13.7	14.9	12.8	13.6	11.6	10.2	13.3	12.0	13.0
1953	10.1	10.2	9.3	8.0	8.9	10.5	13.0	14.0	12.0	12.8	10.8	9.5	12.3	11.0	11.8
1954	11.6	11.7	10.8	9.7	10.6	12.2	14.7	15.7	13.9	14.7	13.0	11.8	14.6	13.6	14.5
1955	12.2	12.3	11.5	10.5	11.4	12.9	15.3	16.4	14.7	15.4	13.8	12.8	15.5	14.5	15.5
1956	11.9	12.0	11.3	10.2	11.1	12.6	14.8	15.8	14.2	14.9	13.4	12.4	14.9	14.0	14.8
1957	11.1	11.2	10.4	9.4	10.2	11.6	13.7	14.7	13.0	13.7	12.1	11.1	13.4	12.5	13.2
1958	12.0	12.1	11.4	10.5	11.3	12.7	14.8	15.7	14.2	14.8	13.4	12.5	14.8	14.0	14.7
1959	11.9	12.0	11.4	10.4	11.2	12.5	14.6	15.5	14.0	14.6	13.2	12.3	14.5	13.7	14.4
1960	11.5	11.6	10.9	10.0	10.8	12.1	14.0	14.8	13.4	14.0	12.6	11.7	13.8	13.0	13.6
1961	11.9	12.0	11.3	10.5	11.2	12.5	14.4	15.2	13.8	14.4	13.1	12.3	14.2	13.5	14.1
1962	11.3	11.4	10.7	9.8	10.5	11.7	13.5	14.3	12.9	13.4	12.2	11.3	13.2	12.5	13.0
1963	11.5	11.6	10.9	10.1	10.8	12.0	13.7	14.5	13.1	13.7	12.4	11.7	13.5	12.8	13.3
1964	11.5	11.6	11.0	10.2	10.9	12.0	13.7	14.4	13.1	13.6	12.5	11.7	13.4	12.8	13.3
1965	11.5	11.5	10.9	10.1	10.8	11.9	13.5	14.2	13.0	13.5	12.3	11.6	13.3	12.6	13.1
1966	10.8	10.9	10.3	9.5	10.1	11.1	12.7	13.4	12.2	12.6	11.5	10.7	12.3	11.6	12.1
1967	11.0	11.1	10.5	9.8	10.4	11.4	12.9	13.6	12.4	12.8	11.7	11.0	12.5	11.9	12.3
1968	10.9	11.0	10.4	9.7	10.2	11.2	12.7	13.3	12.2	12.6	11.5	10.8	12.3	11.7	12.1
1969	10.3	10.4	9.8	9.1	9.6	10.6	12.0	12.6	11.4	11.8	10.8	10.1	11.5	10.8	11.2
1970	10.0	10.1	9.5	8.8	9.3	10.2	11.6	12.2	11.1	11.4	10.4	9.7	11.0	10.4	10.8

*Standard and Poor's 500 index total returns minus 30-day Treasury bill total returns.

Short-Horizon Equity Risk Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-3

End	Start Date														
Date	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
1971	10.0	10.1	9.5	8.8	9.3	10.2	11.6	12.1	11.0	11.4	10.4	9.7	11.0	10.4	10.7
1972	10.1	10.2	9.6	8.9	9.5	10.3	11.7	12.2	11.1	11.5	10.5	9.8	11.1	10.5	10.9
1973	9.5	9.5	9.0	8.3	8.8	9.6	10.9	11.4	10.3	10.6	9.6	9.0	10.2	9.6	9.9
1974	8.6	8.6	8.0	7.3	7.8	8.6	9.8	10.3	9.2	9.5	8.5	7.8	9.0	8.4	8.7
1975	9.0	9.0	8.5	7.8	8.3	9.1	10.3	10.8	9.7	10.0	9.1	8.5	9.6	9.0	9.3
1976	9.2	9.2	8.7	8.1	8.5	9.3	10.5	11.0	10.0	10.2	9.3	8.7	9.8	9.3	9.5
1977	8.8	8.8	8.3	7.7	8.1	8.9	10.0	10.4	9.5	9.7	8.8	8.2	9.3	8.7	9.0
1978	8.6	8.6	8.1	7.5	7.9	8.7	9.8	10.2	9.2	9.5	8.6	8.0	9.0	8.5	8.7
1979	8.6	8.6	8.1	7.5	7.9	8.6	9.8	10.2	9.2	9.4	8.6	8.0	9.0	8.5	8.7
1980	8.9	8.9	8.4	7.8	8.2	8.9	10.0	10.4	9.5	9.7	8.9	8.3	9.3	8.8	9.0
1981	8.3	8.3	7.9	7.3	7.7	8.3	9.4	9.8	8.9	9.1	8.2	7.7	8.7	8.1	8.3
1982	8.4	8.4	7.9	7.3	7.7	8.4	9.4	9.8	8.9	9.1	8.3	7.7	8.7	8.2	8.4
1983	8.5	8.5	8.0	7.4	7.8	8.5	9.5	9.9	9.0	9.2	8.4	7.9	8.8	8.3	8.5
1984	8.3	8.3	7.8	7.2	7.6	8.3	9.3	9.6	8.8	9.0	8.2	7.6	8.6	8.1	8.3
1985	8.5	8.5	8.1	7.5	7.9	8.6	9.5	9.9	9.0	9.3	8.5	8.0	8.9	8.4	8.6
1986	8.6	8.6	8.2	7.6	8.0	8.6	9.6	9.9	9.1	9.3	8.6	8.1	8.9	8.5	8.7
1987	8.5	8.5	8.0	7.5	7.9	8.5	9.4	9.8	8.9	9.1	8.4	7.9	8.8	8.3	8.5
1988	8.5	8.5	8.1	7.5	7.9	8.5	9.4	9.8	9.0	9.2	8.4	7.9	8.8	8.3	8.5
1989	8.7	8.7	8.3	7.8	8.1	8.8	9.7	10.0	9.2	9.4	8.7	8.2	9.1	8.6	8.8
1990	8.4	8.4	8.0	7.5	7.8	8.4	9.3	9.6	8.9	9.1	8.4	7.9	8.7	8.3	8.4
1991	8.7	8.7	8.3	7.8	8.1	8.7	9.6	9.9	9.1	9.3	8.6	8.2	9.0	8.6	8.8
1992	8.6	8.6	8.2	7.7	8.0	8.6	9.5	9.8	9.1	9.2	8.6	8.1	8.9	8.5	8.7
1993	8.6	8.6	8.2	7.7	8.0	8.6	9.5	9.8	9.0	9.2	8.5	8.1	8.9	8.5	8.6
1994	8.4	8.4	8.0	7.6	7.9	8.4	9.3	9.6	8.8	9.0	8.4	7.9	8.7	8.3	8.4
1995	8.8	8.8	8.4	7.9	8.2	8.8	9.6	9.9	9.2	9.4	8.7	8.3	9.1	8.7	8.9
1996	8.9	8.9	8.5	8.1	8.4	8.9	9.7	10.0	9.3	9.5	8.9	8.5	9.2	8.8	9.0
1997	9.2	9.2	8.8	8.4	8.7	9.2	10.0	10.3	9.6	9.8	9.2	8.8	9.5	9.2	9.3
1998	9.4	9.4	9.0	8.6	8.9	9.4	10.2	10.5	9.9	10.0	9.4	9.0	9.8	9.4	9.6
1999	9.4	9.5	9.1	8.7	9.0	9.5	10.3	10.6	10.0	10.1	9.5	9.2	9.9	9.5	9.7
2000	9.1	9.1	8.8	8.4	8.7	9.2	9.9	10.2	9.6	9.7	9.2	8.8	9.5	9.1	9.3
2001	8.8	8.8	8.5	8.0	8.3	8.8	9.6	9.9	9.2	9.4	8.8	8.4	9.1	8.7	8.9
2002	8.4	8.4	8.0	7.6	7.9	8.4	9.1	9.4	8.7	8.9	8.3	7.9	8.6	8.2	8.4
2003	8.6	8.6	8.3	7.9	8.1	8.6	9.4	9.6	9.0	9.2	8.6	8.2	8.9	8.5	8.7
2004	8.6	8.6	8.3	7.9	8.2	8.6	9.4	9.6	9.0	9.2	8.6	8.2	8.9	8.5	8.7
2005	8.5	8.6	8.2	7.8	8.1	8.6	9.3	9.5	8.9	9.1	8.5	8.1	8.8	8.4	8.6
2006	8.6	8.6	8.3	7.8	8.1	8.6	9.3	9.5	8.9	9.1	8.5	8.2	8.8	8.5	8.6
2007	8.5	8.5	8.2	7.8	8.0	8.5	9.2	9.4	8.8	9.0	8.4	8.1	8.7	8.4	8.5
2008	7.9	7.9	7.6	7.2	7.4	7.9	8.6	8.8	8.2	8.3	7.8	7.4	8.0	7.7	7.8

*Standard and Poor's 500 index total returns minus 30-day Treasury bill total returns.

Short-Horizon Equity Risk Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-3

End Date	Start Date 1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
1926															
1927															
1928															
1929															
1930															
1931															
1932															
1933															
1934															
1935															
1936															
1937															
1938															
1939															
1940															
1941	-11.7														
1942	4.2	20.1													
1943	11.3	22.8	25.6												
1944	13.3	21.7	22.5	19.4											
1945	17.9	25.3	27.0	27.8	36.1										
1946	13.5	18.5	18.2	15.7	13.8	-8.4									
1947	12.3	16.3	15.6	13.1	11.0	-1.6	5.2								
1948	11.4	14.7	13.8	11.4	9.4	0.5	4.9	4.7							
1949	12.1	15.0	14.3	12.4	11.1	4.8	9.2	11.2	17.7						
1950	13.9	16.8	16.3	15.0	14.3	9.9	14.5	17.6	24.1	30.5					
1951	14.7	17.3	17.0	16.0	15.5	12.0	16.1	18.9	23.6	26.5	22.5				
1952	14.9	17.3	17.0	16.0	15.6	12.7	16.2	18.4	21.9	23.3	19.6	16.7			
1953	13.5	15.6	15.2	14.2	13.6	10.8	13.5	14.9	16.9	16.7	12.1	6.9	-2.8		
1954	16.2	18.4	18.2	17.6	17.4	15.3	18.3	20.2	22.7	23.7	22.0	21.9	24.5	51.8	
1955	17.2	19.2	19.1	18.6	18.5	16.8	19.6	21.4	23.8	24.8	23.6	23.9	26.3	40.9	30.0
1956	16.3	18.2	18.1	17.5	17.3	15.6	18.0	19.5	21.3	21.8	20.4	19.9	20.8	28.6	17.0
1957	14.6	16.2	15.9	15.3	14.9	13.2	15.1	16.1	17.4	17.4	15.5	14.3	13.8	18.0	6.7
1958	16.1	17.7	17.6	17.0	16.9	15.4	17.4	18.5	19.8	20.1	18.8	18.2	18.5	22.7	15.5
1959	15.7	17.2	17.1	16.5	16.3	14.9	16.7	17.7	18.9	19.0	17.7	17.1	17.1	20.5	14.2
1960	14.8	16.2	16.0	15.4	15.2	13.8	15.4	16.1	17.1	17.0	15.7	14.9	14.7	17.2	11.5
1961	15.3	16.6	16.4	15.9	15.7	14.5	16.0	16.8	17.7	17.7	16.5	15.9	15.8	18.2	13.4
1962	14.1	15.3	15.1	14.5	14.2	12.9	14.3	14.9	15.6	15.4	14.2	13.4	13.1	14.9	10.3
1963	14.3	15.5	15.3	14.8	14.5	13.3	14.6	15.2	15.9	15.7	14.6	14.0	13.7	15.4	11.3
1964	14.3	15.4	15.2	14.7	14.4	13.3	14.5	15.0	15.7	15.6	14.5	13.9	13.6	15.1	11.5
1965	14.0	15.1	14.9	14.4	14.2	13.1	14.2	14.7	15.3	15.1	14.1	13.5	13.2	14.6	11.2
1966	12.9	13.9	13.6	13.1	12.8	11.7	12.7	13.1	13.6	13.4	12.3	11.6	11.2	12.3	9.0
1967	13.2	14.1	13.9	13.4	13.1	12.1	13.1	13.5	13.9	13.7	12.7	12.1	11.8	12.9	9.9
1968	12.9	13.8	13.6	13.1	12.8	11.8	12.7	13.1	13.5	13.3	12.3	11.7	11.4	12.4	9.6
1969	11.9	12.8	12.5	12.0	11.7	10.7	11.5	11.8	12.2	11.9	10.9	10.3	9.9	10.7	7.9
1970	11.5	12.3	12.0	11.5	11.2	10.2	10.9	11.2	11.5	11.2	10.2	9.6	9.2	9.9	7.3

*Standard and Poor's 500 index total returns minus 30-day Treasury bill total returns.

Short-Horizon Equity Risk Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-3

End	Start Date														
Date	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
1971	11.4	12.2	11.9	11.4	11.1	10.2	10.9	11.1	11.4	11.1	10.2	9.6	9.2	9.9	7.4
1972	11.5	12.3	12.0	11.5	11.3	10.3	11.1	11.3	11.6	11.3	10.4	9.9	9.5	10.2	7.9
1973	10.5	11.2	10.9	10.4	10.1	9.2	9.9	10.0	10.2	9.9	9.0	8.4	8.0	8.6	6.3
1974	9.2	9.8	9.5	9.0	8.6	7.7	8.3	8.4	8.5	8.2	7.2	6.6	6.1	6.5	4.3
1975	9.8	10.5	10.2	9.7	9.4	8.5	9.1	9.2	9.4	9.1	8.2	7.6	7.2	7.7	5.6
1976	10.1	10.7	10.4	10.0	9.7	8.8	9.4	9.5	9.7	9.4	8.6	8.0	7.7	8.1	6.2
1977	9.5	10.1	9.8	9.3	9.0	8.2	8.7	8.8	9.0	8.6	7.8	7.3	6.9	7.3	5.4
1978	9.2	9.8	9.5	9.0	8.7	7.9	8.4	8.5	8.6	8.3	7.5	7.0	6.6	7.0	5.1
1979	9.2	9.7	9.5	9.0	8.7	7.9	8.4	8.5	8.6	8.3	7.6	7.0	6.7	7.0	5.2
1980	9.5	10.0	9.8	9.3	9.1	8.3	8.8	8.9	9.0	8.7	8.0	7.5	7.2	7.6	5.9
1981	8.8	9.3	9.0	8.6	8.3	7.5	8.0	8.0	8.1	7.9	7.1	6.6	6.3	6.6	4.9
1982	8.8	9.3	9.1	8.6	8.4	7.6	8.1	8.1	8.2	7.9	7.2	6.7	6.4	6.7	5.1
1983	8.9	9.4	9.2	8.8	8.5	7.8	8.2	8.3	8.4	8.1	7.4	7.0	6.7	7.0	5.4
1984	8.7	9.1	8.9	8.5	8.2	7.5	7.9	8.0	8.1	7.8	7.1	6.6	6.3	6.6	5.1
1985	9.0	9.5	9.2	8.8	8.6	7.9	8.3	8.4	8.5	8.2	7.6	7.2	6.9	7.2	5.7
1986	9.1	9.5	9.3	8.9	8.7	8.0	8.4	8.5	8.6	8.3	7.7	7.3	7.0	7.3	5.9
1987	8.9	9.3	9.1	8.7	8.5	7.8	8.2	8.3	8.4	8.1	7.5	7.1	6.8	7.1	5.8
1988	8.9	9.3	9.1	8.7	8.5	7.9	8.3	8.3	8.4	8.2	7.6	7.2	6.9	7.2	5.9
1989	9.2	9.6	9.4	9.1	8.8	8.2	8.6	8.7	8.8	8.6	8.0	7.6	7.4	7.6	6.4
1990	8.8	9.2	9.0	8.6	8.4	7.8	8.2	8.2	8.3	8.1	7.5	7.1	6.9	7.1	5.9
1991	9.1	9.5	9.3	9.0	8.8	8.2	8.5	8.6	8.7	8.5	7.9	7.6	7.3	7.6	6.4
1992	9.0	9.4	9.2	8.9	8.7	8.1	8.4	8.5	8.6	8.4	7.9	7.5	7.3	7.5	6.4
1993	9.0	9.4	9.2	8.8	8.6	8.1	8.4	8.5	8.6	8.4	7.8	7.5	7.3	7.5	6.4
1994	8.8	9.2	8.9	8.6	8.4	7.8	8.2	8.2	8.3	8.1	7.6	7.3	7.0	7.3	6.2
1995	9.2	9.6	9.4	9.1	8.9	8.3	8.7	8.7	8.8	8.6	8.1	7.8	7.6	7.9	6.8
1996	9.3	9.7	9.5	9.2	9.0	8.5	8.8	8.9	9.0	8.8	8.4	8.0	7.8	8.1	7.0
1997	9.7	10.1	9.9	9.6	9.4	8.9	9.2	9.3	9.4	9.2	8.8	8.5	8.3	8.5	7.5
1998	9.9	10.3	10.1	9.8	9.7	9.2	9.5	9.6	9.7	9.5	9.1	8.8	8.6	8.9	7.9
1999	10.0	10.4	10.2	10.0	9.8	9.3	9.6	9.7	9.8	9.7	9.2	9.0	8.8	9.0	8.1
2000	9.6	10.0	9.8	9.5	9.3	8.9	9.2	9.2	9.3	9.2	8.7	8.5	8.3	8.5	7.6
2001	9.2	9.5	9.4	9.1	8.9	8.4	8.7	8.8	8.9	8.7	8.3	8.0	7.8	8.0	7.1
2002	8.7	9.0	8.8	8.5	8.3	7.9	8.1	8.2	8.3	8.1	7.7	7.4	7.2	7.4	6.5
2003	9.0	9.3	9.1	8.8	8.7	8.2	8.5	8.5	8.6	8.4	8.0	7.8	7.6	7.8	6.9
2004	9.0	9.3	9.1	8.9	8.7	8.2	8.5	8.6	8.6	8.5	8.1	7.8	7.6	7.8	6.9
2005	8.9	9.2	9.0	8.7	8.6	8.1	8.4	8.4	8.5	8.4	7.9	7.7	7.5	7.7	6.8
2006	8.9	9.2	9.0	8.8	8.6	8.2	8.4	8.5	8.6	8.4	8.0	7.7	7.6	7.8	6.9
2007	8.8	9.1	8.9	8.7	8.5	8.0	8.3	8.4	8.4	8.3	7.9	7.6	7.5	7.6	6.8
2008	8.1	8.4	8.2	7.9	7.8	7.3	7.6	7.6	7.6	7.5	7.1	6.8	6.6	6.8	6.0

*Standard and Poor's 500 index total returns minus 30-day Treasury bill total returns.

Short-Horizon Equity Risk Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-3

End Date	Start Date 1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
1926															
1927															
1928															
1929															
1930															
1931															
1932															
1933															
1934															
1935															
1936															
1937															
1938															
1939															
1940															
1941															
1942															
1943															
1944															
1945															
1946															
1947															
1948															
1949															
1950															
1951															
1952															
1953															
1954															
1955															
1956	4.1														
1957	-4.9	-13.9													
1958	10.7	14.0	41.8												
1959	10.3	12.3	25.4	9.0											
1960	7.8	8.7	16.2	3.4	-2.2										
1961	10.6	11.9	18.3	10.5	11.3	24.8									
1962	7.4	8.0	12.4	5.0	3.7	6.6	-11.5								
1963	9.0	9.7	13.6	8.0	7.7	11.0	4.1	19.7							
1964	9.4	10.1	13.5	8.8	8.7	11.5	7.1	16.3	12.9						
1965	9.3	9.9	12.9	8.8	8.7	10.9	7.4	13.7	10.7	8.5					
1966	7.1	7.4	9.8	5.8	5.3	6.6	3.0	6.6	2.2	-3.1	-14.8				
1967	8.2	8.6	10.8	7.4	7.2	8.5	5.8	9.2	6.6	4.5	2.5	19.8			
1968	8.0	8.3	10.4	7.2	7.0	8.2	5.8	8.7	6.5	4.8	3.6	12.8	5.9		
1969	6.4	6.5	8.2	5.2	4.8	5.6	3.2	5.3	2.9	0.8	-1.1	3.5	-4.6	-15.1	
1970	5.8	5.9	7.4	4.5	4.1	4.7	2.5	4.3	2.1	0.3	-1.4	2.0	-4.0	-8.9	-2.7

*Standard and Poor's 500 index total returns minus 30-day Treasury bill total returns.

Short-Horizon Equity Risk Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-3

End Date	Start Date 1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
1971	6.0	6.1	7.6	4.9	4.6	5.2	3.3	4.9	3.1	1.6	0.5	3.6	-0.5	-2.6	3.6
1972	6.6	6.7	8.1	5.7	5.4	6.0	4.3	5.9	4.4	3.3	2.6	5.5	2.6	1.8	7.5
1973	5.0	5.0	6.2	3.9	3.5	3.9	2.2	3.4	1.8	0.6	-0.4	1.6	-1.4	-2.9	0.2
1974	2.9	2.8	3.8	1.5	1.0	1.2	-0.6	0.3	-1.5	-2.9	-4.2	-2.9	-6.1	-8.1	-6.7
1975	4.3	4.3	5.4	3.2	2.9	3.2	1.7	2.7	1.2	0.2	-0.7	0.9	-1.4	-2.5	-0.4
1976	5.0	5.1	6.1	4.1	3.8	4.2	2.8	3.8	2.6	1.7	1.1	2.7	0.8	0.2	2.4
1977	4.2	4.2	5.2	3.2	2.9	3.2	1.9	2.7	1.5	0.7	0.0	1.3	-0.5	-1.2	0.5
1978	4.0	4.0	4.9	3.0	2.7	3.0	1.7	2.5	1.4	0.6	0.0	1.2	-0.5	-1.1	0.4
1979	4.2	4.2	5.0	3.3	3.0	3.3	2.1	2.9	1.8	1.1	0.5	1.7	0.2	-0.3	1.2
1980	4.9	4.9	5.7	4.1	3.9	4.2	3.1	3.9	3.0	2.3	1.9	3.1	1.8	1.5	3.0
1981	3.9	3.9	4.7	3.1	2.8	3.0	1.9	2.7	1.7	1.0	0.6	1.6	0.3	-0.1	1.1
1982	4.2	4.2	4.9	3.4	3.2	3.4	2.4	3.1	2.2	1.6	1.2	2.2	1.0	0.7	1.9
1983	4.5	4.6	5.3	3.8	3.6	3.8	2.9	3.6	2.8	2.2	1.9	2.9	1.8	1.5	2.7
1984	4.3	4.3	4.9	3.5	3.3	3.5	2.6	3.3	2.5	1.9	1.6	2.5	1.5	1.2	2.3
1985	4.9	5.0	5.6	4.3	4.1	4.4	3.5	4.2	3.5	3.0	2.7	3.6	2.8	2.6	3.7
1986	5.2	5.2	5.9	4.6	4.4	4.7	3.9	4.5	3.8	3.4	3.2	4.1	3.3	3.1	4.2
1987	5.0	5.0	5.7	4.4	4.3	4.5	3.7	4.3	3.7	3.3	3.0	3.9	3.1	2.9	3.9
1988	5.2	5.2	5.8	4.6	4.5	4.7	4.0	4.5	3.9	3.6	3.3	4.2	3.4	3.3	4.3
1989	5.7	5.7	6.4	5.2	5.1	5.3	4.6	5.2	4.7	4.4	4.2	5.0	4.3	4.3	5.2
1990	5.2	5.3	5.8	4.7	4.6	4.8	4.1	4.7	4.1	3.8	3.6	4.3	3.7	3.6	4.5
1991	5.8	5.8	6.4	5.3	5.2	5.4	4.8	5.4	4.8	4.5	4.4	5.2	4.6	4.5	5.4
1992	5.7	5.8	6.3	5.3	5.2	5.4	4.8	5.3	4.8	4.5	4.4	5.1	4.5	4.5	5.3
1993	5.8	5.8	6.4	5.3	5.2	5.5	4.9	5.4	4.9	4.6	4.5	5.2	4.6	4.6	5.4
1994	5.5	5.6	6.1	5.1	5.0	5.2	4.6	5.1	4.7	4.4	4.2	4.9	4.4	4.3	5.1
1995	6.2	6.3	6.8	5.8	5.8	6.0	5.4	5.9	5.5	5.3	5.2	5.9	5.4	5.3	6.1
1996	6.5	6.5	7.1	6.2	6.1	6.3	5.8	6.3	5.9	5.7	5.6	6.3	5.8	5.8	6.6
1997	7.0	7.1	7.6	6.7	6.7	6.9	6.4	6.9	6.5	6.3	6.3	7.0	6.5	6.6	7.3
1998	7.4	7.5	8.0	7.1	7.1	7.3	6.9	7.4	7.0	6.9	6.8	7.5	7.1	7.1	7.9
1999	7.6	7.7	8.2	7.4	7.3	7.6	7.1	7.6	7.3	7.1	7.1	7.7	7.4	7.4	8.2
2000	7.1	7.2	7.7	6.8	6.8	7.0	6.6	7.0	6.7	6.5	6.5	7.1	6.7	6.7	7.4
2001	6.6	6.7	7.1	6.3	6.2	6.5	6.0	6.4	6.1	5.9	5.8	6.4	6.0	6.0	6.7
2002	6.0	6.0	6.4	5.6	5.6	5.7	5.3	5.7	5.3	5.1	5.0	5.6	5.2	5.2	5.8
2003	6.4	6.5	6.9	6.1	6.1	6.2	5.8	6.2	5.9	5.7	5.6	6.2	5.8	5.8	6.4
2004	6.5	6.5	7.0	6.2	6.1	6.3	5.9	6.3	6.0	5.8	5.7	6.3	5.9	5.9	6.5
2005	6.4	6.4	6.9	6.1	6.0	6.2	5.8	6.2	5.9	5.7	5.6	6.2	5.8	5.8	6.4
2006	6.5	6.5	6.9	6.2	6.1	6.3	5.9	6.3	6.0	5.8	5.8	6.3	5.9	5.9	6.5
2007	6.4	6.4	6.8	6.1	6.0	6.2	5.8	6.2	5.9	5.7	5.7	6.2	5.8	5.8	6.4
2008	5.5	5.5	5.9	5.2	5.1	5.3	4.9	5.2	4.9	4.7	4.6	5.1	4.7	4.7	5.2

*Standard and Poor's 500 index total returns minus 30-day Treasury bill total returns.

Short-Horizon Equity Risk Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-3

End Date	Start Date 1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
1971	9.9														
1972	12.5	15.2													
1973	1.2	-3.2	-21.6												
1974	-7.8	-13.6	-28.0	-34.5											
1975	0.1	-2.4	-8.2	-1.5	31.4										
1976	3.2	1.9	-1.5	5.3	25.1	18.8									
1977	1.0	-0.5	-3.6	0.9	12.7	3.3	-12.3								
1978	0.8	-0.5	-3.1	0.6	9.3	2.0	-6.4	-0.6							
1979	1.6	0.6	-1.5	1.9	9.1	3.5	-1.6	3.8	8.2						
1980	3.6	2.9	1.3	4.6	11.1	7.1	4.2	9.6	14.8	21.3					
1981	1.5	0.6	-1.0	1.6	6.8	2.6	-0.6	2.3	3.3	0.8	-19.6				
1982	2.3	1.6	0.2	2.6	7.3	3.8	1.3	4.1	5.2	4.2	-4.3	11.0			
1983	3.2	2.6	1.4	3.8	8.0	5.1	3.1	5.7	6.9	6.6	1.7	12.4	13.8		
1984	2.7	2.1	1.0	3.1	6.8	4.1	2.3	4.3	5.2	4.6	0.4	7.1	5.1	-3.6	
1985	4.1	3.7	2.8	4.8	8.4	6.1	4.7	6.8	7.9	7.8	5.1	11.3	11.4	10.2	24.0
1986	4.6	4.3	3.5	5.4	8.7	6.7	5.5	7.4	8.4	8.5	6.3	11.5	11.7	11.0	18.3
1987	4.3	4.0	3.2	5.0	8.1	6.1	5.0	6.7	7.5	7.4	5.4	9.6	9.3	8.2	12.1
1988	4.7	4.4	3.7	5.4	8.2	6.4	5.4	7.0	7.8	7.7	6.0	9.7	9.5	8.6	11.6
1989	5.6	5.4	4.8	6.5	9.2	7.6	6.8	8.4	9.2	9.3	7.9	11.4	11.4	11.0	14.0
1990	4.8	4.6	4.0	5.5	8.0	6.4	5.5	6.9	7.5	7.4	6.1	8.9	8.6	7.9	9.8
1991	5.8	5.6	5.1	6.5	9.0	7.6	6.8	8.2	8.8	8.9	7.8	10.5	10.4	10.0	12.0
1992	5.7	5.5	5.0	6.4	8.7	7.3	6.6	7.9	8.5	8.5	7.5	9.9	9.8	9.4	11.0
1993	5.8	5.6	5.1	6.5	8.6	7.3	6.7	7.8	8.4	8.4	7.4	9.7	9.6	9.2	10.6
1994	5.4	5.2	4.8	6.0	8.0	6.8	6.1	7.2	7.7	7.7	6.7	8.7	8.6	8.1	9.3
1995	6.5	6.3	6.0	7.2	9.2	8.1	7.5	8.6	9.2	9.2	8.4	10.4	10.4	10.1	11.3
1996	6.9	6.8	6.4	7.7	9.6	8.5	8.0	9.1	9.6	9.7	9.0	10.9	10.9	10.7	11.9
1997	7.7	7.6	7.3	8.5	10.4	9.4	9.0	10.0	10.6	10.7	10.1	12.0	12.0	11.9	13.1
1998	8.3	8.2	7.9	9.1	10.9	10.0	9.6	10.7	11.3	11.4	10.9	12.7	12.8	12.7	13.9
1999	8.5	8.5	8.3	9.4	11.2	10.3	9.9	11.0	11.5	11.7	11.2	12.9	13.0	12.9	14.0
2000	7.8	7.7	7.4	8.5	10.1	9.3	8.9	9.8	10.3	10.4	9.9	11.4	11.4	11.3	12.2
2001	7.0	6.9	6.6	7.6	9.2	8.3	7.9	8.8	9.2	9.2	8.6	10.0	10.0	9.8	10.6
2002	6.0	5.9	5.6	6.6	8.0	7.1	6.7	7.5	7.8	7.8	7.2	8.4	8.3	8.0	8.7
2003	6.7	6.6	6.3	7.3	8.7	7.9	7.5	8.2	8.6	8.6	8.1	9.3	9.2	9.0	9.7
2004	6.8	6.7	6.4	7.3	8.7	7.9	7.6	8.3	8.6	8.6	8.1	9.3	9.3	9.0	9.7
2005	6.6	6.6	6.3	7.2	8.5	7.7	7.4	8.1	8.4	8.4	7.9	9.0	8.9	8.7	9.3
2006	6.8	6.7	6.4	7.3	8.6	7.8	7.5	8.2	8.5	8.5	8.0	9.1	9.0	8.8	9.4
2007	6.6	6.5	6.3	7.1	8.3	7.6	7.3	7.9	8.2	8.2	7.7	8.8	8.7	8.5	9.0
2008	5.4	5.3	5.0	5.8	7.0	6.2	5.8	6.4	6.7	6.6	6.1	7.0	6.9	6.6	7.0

*Standard and Poor's 500 index total returns minus 30-day Treasury bill total returns.

Short-Horizon Equity Risk Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-3

End Date	Start Date 1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1971															
1972															
1973															
1974															
1975															
1976															
1977															
1978															
1979															
1980															
1981															
1982															
1983															
1984															
1985															
1986	12.5														
1987	6.1	-0.2													
1988	7.5	5.0	10.3												
1989	11.5	11.1	16.8	23.3											
1990	7.0	5.6	7.6	6.2	-10.9										
1991	10.0	9.5	11.9	12.4	7.0	24.9									
1992	9.1	8.6	10.3	10.3	6.0	14.5	4.1								
1993	8.9	8.4	9.8	9.7	6.3	12.1	5.6	7.2							
1994	7.6	7.0	8.0	7.7	4.5	8.4	2.9	2.3	-2.6						
1995	10.1	9.8	11.0	11.1	9.1	13.1	10.2	12.2	14.7	32.0					
1996	10.8	10.6	11.8	12.0	10.3	13.9	11.7	13.6	15.7	24.9	17.8				
1997	12.2	12.2	13.4	13.8	12.6	15.9	14.4	16.5	18.8	25.9	22.9	28.1			
1998	13.1	13.1	14.3	14.8	13.8	16.9	15.8	17.7	19.8	25.4	23.2	25.9	23.7		
1999	13.3	13.4	14.5	14.9	14.1	16.8	15.8	17.5	19.2	23.6	21.5	22.7	20.0	16.4	
2000	11.4	11.4	12.2	12.4	11.4	13.7	12.4	13.4	14.3	17.2	14.2	13.3	8.4	0.7	-15.0
2001	9.7	9.5	10.2	10.2	9.2	11.0	9.6	10.2	10.6	12.5	9.2	7.5	2.3	-4.8	-15.4
2002	7.8	7.5	8.0	7.8	6.6	8.1	6.6	6.8	6.8	7.9	4.5	2.3	-2.9	-9.5	-18.2
2003	8.9	8.7	9.2	9.1	8.1	9.6	8.3	8.7	8.9	10.1	7.4	5.9	2.2	-2.1	-6.7
2004	8.9	8.7	9.2	9.2	8.2	9.6	8.4	8.8	8.9	10.1	7.6	6.4	3.3	-0.1	-3.4
2005	8.6	8.4	8.8	8.7	7.8	9.1	8.0	8.3	8.3	9.3	7.1	5.9	3.1	0.2	-2.5
2006	8.7	8.5	8.9	8.9	8.0	9.2	8.2	8.5	8.6	9.5	7.4	6.4	4.0	1.5	-0.6
2007	8.3	8.1	8.5	8.4	7.6	8.7	7.7	7.9	8.0	8.8	6.9	5.9	3.7	1.4	-0.4
2008	6.3	6.0	6.3	6.1	5.2	6.1	5.0	5.0	4.9	5.4	3.4	2.2	-0.2	-2.6	-4.7

*Standard and Poor's 500 index total returns minus 30-day Treasury bill total returns.

Short-Horizon Equity Risk Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-3

End Date	Start Date 2001	2002	2003	2004	2005	2006	2007	2008
1971								
1972								
1973								
1974								
1975								
1976								
1977								
1978								
1979								
1980								
1981								
1982								
1983								
1984								
1985								
1986								
1987								
1988								
1989								
1990								
1991								
1992								
1993								
1994								
1995								
1996								
1997								
1998								
1999								
2000								
2001	-15.7							
2002	-19.7	-23.7						
2003	-3.9	2.0	27.7					
2004	-0.5	4.5	18.7	9.7				
2005	0.0	3.9	13.1	5.8	1.9			
2006	1.8	5.3	12.6	7.5	6.5	11.0		
2007	1.7	4.6	10.2	5.9	4.6	5.9	0.8	
2008	-3.4	-1.6	2.1	-3.0	-6.2	-8.9	-18.9	-0.4

*Standard and Poor's 500 index total returns minus 30-day Treasury bill total returns.

Mid-Cap Size Premia* (in percent)

2009 Ibbotson SBBI Valuation Edition Yearbook: Appendix A, Table A-4

End	Start Date														
Date	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
1926															
1927															
1928															
1929															
1930	-8.8														
1931	-8.0	-7.5													
1932	-6.6	-5.9	-5.7												
1933	-0.4	1.1	2.7	5.1											
1934	1.1	2.6	4.3	6.7	11.4										
1935	-0.3	1.0	2.2	3.8	7.1	9.5									
1936	-0.4	0.6	1.6	3.0	5.6	7.4	7.3								
1937	-0.5	0.5	1.3	2.5	4.8	6.3	6.2	6.3							
1938	-0.3	0.6	1.4	2.5	4.5	5.7	5.5	5.5	-0.3						
1939	-0.4	0.5	1.2	2.2	4.0	5.0	4.7	4.6	-0.6	-3.2					
1940	0.1	0.9	1.6	2.6	4.2	5.1	4.9	5.0	0.5	-1.5	0.8				
1941	0.4	1.2	1.9	2.8	4.3	5.2	5.0	5.1	1.2	-0.5	1.6	2.7			
1942	0.2	1.0	1.6	2.4	3.8	4.5	4.3	4.3	0.8	-0.7	1.0	1.6	2.1		
1943	0.7	1.4	2.1	2.8	4.1	4.8	4.6	4.6	1.5	0.3	1.9	2.7	3.1	3.5	
1944	1.1	1.7	2.3	3.1	4.3	5.0	4.8	4.7	2.0	1.0	2.5	3.2	3.6	3.9	5.2
1945	1.8	2.5	3.1	3.8	4.9	5.6	5.4	5.4	3.0	2.3	3.7	4.4	5.0	5.4	7.0
1946	1.7	2.3	2.9	3.6	4.6	5.2	5.1	5.1	2.8	2.0	3.3	4.0	4.4	4.7	5.8
1947	1.4	2.0	2.5	3.1	4.1	4.6	4.4	4.4	2.2	1.5	2.6	3.1	3.4	3.6	4.4
1948	1.1	1.6	2.1	2.7	3.6	4.0	3.8	3.8	1.7	1.0	2.0	2.4	2.6	2.7	3.4
1949	1.1	1.6	2.0	2.6	3.4	3.9	3.7	3.6	1.7	1.0	1.9	2.3	2.5	2.5	3.2
1950	0.8	1.3	1.7	2.2	3.0	3.4	3.1	3.0	1.2	0.6	1.4	1.7	1.8	1.8	2.4
1951	0.4	0.9	1.3	1.7	2.4	2.8	2.5	2.3	0.6	0.1	0.8	1.0	1.1	1.0	1.6
1952	0.1	0.5	0.9	1.3	1.9	2.2	1.9	1.8	0.2	-0.4	0.2	0.4	0.5	0.4	0.9
1953	0.1	0.5	0.9	1.3	1.9	2.2	1.9	1.8	0.3	-0.3	0.3	0.5	0.5	0.5	1.0
1954	0.0	0.4	0.7	1.1	1.6	1.9	1.6	1.5	0.1	-0.3	0.2	0.3	0.4	0.4	1.0
1955	-0.5	-0.1	0.1	0.4	1.0	1.2	0.9	0.8	-0.5	-0.9	-0.5	-0.4	-0.3	-0.3	0.4
1956	-0.4	0.0	0.2	0.5	1.0	1.2	1.0	0.9	-0.3	-0.7	-0.3	-0.2	-0.1	0.0	0.7
1957	-0.4	0.0	0.2	0.5	1.0	1.2	1.0	1.0	-0.2	-0.6	-0.2	-0.2	0.0	0.1	0.7
1958	-0.1	0.2	0.5	0.7	1.2	1.4	1.2	1.2	0.1	-0.2	0.2	0.2	0.4	0.5	1.2
1959	0.0	0.3	0.5	0.8	1.2	1.5	1.3	1.2	0.2	-0.1	0.3	0.3	0.5	0.7	1.3
1960	0.0	0.4	0.6	0.9	1.3	1.5	1.3	1.3	0.4	0.1	0.4	0.5	0.7	0.8	1.4
1961	0.0	0.3	0.5	0.8	1.2	1.4	1.2	1.2	0.3	0.0	0.4	0.4	0.6	0.7	1.4
1962	-0.1	0.3	0.5	0.7	1.1	1.3	1.1	1.1	0.2	-0.1	0.2	0.3	0.5	0.5	1.1
1963	-0.3	0.0	0.2	0.4	0.8	1.0	0.8	0.8	-0.1	-0.4	-0.1	0.0	0.1	0.2	0.7
1964	-0.3	0.0	0.2	0.4	0.8	1.0	0.8	0.8	-0.1	-0.3	0.0	0.0	0.1	0.2	0.7
1965	0.0	0.3	0.5	0.7	1.1	1.3	1.1	1.1	0.3	0.1	0.4	0.4	0.6	0.7	1.2
1966	0.2	0.5	0.7	0.9	1.2	1.4	1.3	1.3	0.5	0.3	0.6	0.6	0.8	0.9	1.3
1967	0.5	0.8	1.0	1.2	1.6	1.8	1.6	1.6	0.9	0.7	1.0	1.0	1.2	1.3	1.8
1968	0.7	1.0	1.2	1.4	1.8	1.9	1.8	1.8	1.1	0.9	1.2	1.3	1.4	1.6	2.0
1969	0.6	0.8	1.0	1.2	1.6	1.8	1.6	1.6	0.9	0.7	1.0	1.0	1.2	1.3	1.7
1970	0.4	0.7	0.9	1.1	1.4	1.6	1.4	1.4	0.7	0.5	0.7	0.8	0.9	0.9	1.3

*Beta and equity risk premium estimated using the Standard and Poor's 500 index.

Mid-Cap Size Premia* (in percent)

2009 Ibbotson SBBI Valuation Edition Yearbook: Appendix A, Table A-4

End	Start Date														
Date	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
1971	0.5	0.8	1.0	1.2	1.5	1.7	1.5	1.5	0.8	0.6	0.9	0.9	1.0	1.1	1.4
1972	0.3	0.5	0.7	0.9	1.2	1.3	1.2	1.2	0.5	0.3	0.5	0.6	0.7	0.7	1.0
1973	0.0	0.3	0.4	0.6	0.9	1.1	0.9	0.9	0.1	-0.1	0.2	0.2	0.3	0.3	0.5
1974	0.2	0.5	0.6	0.8	1.1	1.3	1.1	1.1	0.4	0.2	0.4	0.5	0.6	0.6	0.8
1975	0.5	0.7	0.9	1.1	1.4	1.6	1.4	1.4	0.7	0.5	0.8	0.8	0.9	0.9	1.2
1976	0.8	1.0	1.2	1.4	1.7	1.8	1.7	1.7	1.0	0.8	1.1	1.1	1.2	1.3	1.5
1977	1.0	1.2	1.4	1.6	1.9	2.1	2.0	2.0	1.3	1.1	1.4	1.4	1.5	1.6	1.8
1978	1.1	1.3	1.5	1.7	2.0	2.1	2.0	2.0	1.4	1.2	1.4	1.5	1.6	1.6	1.8
1979	1.3	1.5	1.7	1.9	2.2	2.3	2.2	2.2	1.6	1.4	1.7	1.8	1.9	1.9	2.1
1980	1.2	1.4	1.6	1.8	2.0	2.2	2.1	2.1	1.5	1.3	1.6	1.6	1.7	1.8	2.0
1981	1.4	1.6	1.8	1.9	2.2	2.4	2.3	2.3	1.7	1.5	1.8	1.9	2.0	2.0	2.2
1982	1.4	1.6	1.8	1.9	2.2	2.4	2.3	2.3	1.7	1.6	1.8	1.9	2.0	2.0	2.2
1983	1.4	1.6	1.8	2.0	2.2	2.4	2.3	2.3	1.7	1.6	1.8	1.9	2.0	2.0	2.2
1984	1.3	1.5	1.6	1.8	2.1	2.2	2.1	2.1	1.6	1.4	1.6	1.7	1.8	1.8	2.0
1985	1.2	1.4	1.5	1.7	2.0	2.1	2.0	2.0	1.5	1.3	1.5	1.6	1.7	1.7	1.9
1986	1.1	1.3	1.5	1.6	1.9	2.0	1.9	1.9	1.4	1.3	1.5	1.5	1.6	1.6	1.8
1987	1.1	1.3	1.4	1.6	1.8	1.9	1.9	1.9	1.4	1.2	1.4	1.5	1.6	1.6	1.7
1988	1.1	1.3	1.5	1.6	1.9	2.3	1.9	1.9	1.4	1.3	1.5	1.5	1.6	1.6	1.8
1989	1.0	1.2	1.3	1.4	1.7	1.8	1.7	1.7	1.3	1.1	1.3	1.3	1.4	1.5	1.6
1990	0.9	1.0	1.2	1.3	1.5	1.7	1.6	1.6	1.1	1.0	1.1	1.2	1.3	1.3	1.4
1991	1.0	1.2	1.3	1.4	1.7	1.8	1.7	1.7	1.2	1.1	1.3	1.3	1.4	1.4	1.6
1992	1.1	1.3	1.4	1.5	1.8	1.9	1.8	1.8	1.4	1.2	1.4	1.5	1.6	1.6	1.7
1993	1.2	1.3	1.5	1.6	1.8	2.0	1.9	1.9	1.4	1.3	1.5	1.5	1.6	1.7	1.8
1994	1.1	1.3	1.4	1.5	1.8	1.9	1.8	1.8	1.4	1.2	1.4	1.5	1.5	1.6	1.7
1995	1.0	1.2	1.3	1.4	1.6	1.7	1.7	1.7	1.2	1.1	1.3	1.3	1.4	1.4	1.6
1996	0.9	1.0	1.1	1.3	1.5	1.6	1.5	1.5	1.1	1.0	1.2	1.2	1.3	1.3	1.4
1997	0.7	0.9	1.0	1.1	1.3	1.4	1.3	1.4	1.0	0.8	1.0	1.0	1.1	1.1	1.3
1998	0.3	0.5	0.6	0.7	0.9	1.0	0.9	1.0	0.5	0.4	0.6	0.6	0.7	0.7	0.8
1999	0.4	0.6	0.7	0.8	1.0	1.1	1.0	1.1	0.7	0.5	0.7	0.7	0.8	0.8	0.9
2000	0.5	0.7	0.8	0.9	1.1	1.2	1.1	1.1	0.7	0.6	0.8	0.8	0.9	0.9	1.0
2001	0.6	0.8	0.9	1.0	1.2	1.3	1.2	1.3	0.9	0.7	0.9	0.9	1.0	1.0	1.1
2002	0.7	0.9	1.0	1.1	1.3	1.4	1.3	1.4	1.0	0.9	1.0	1.0	1.1	1.1	1.2
2003	0.9	1.0	1.1	1.2	1.4	1.5	1.5	1.5	1.1	1.0	1.1	1.2	1.2	1.3	1.4
2004	0.9	1.1	1.2	1.3	1.5	1.6	1.5	1.6	1.2	1.1	1.2	1.2	1.3	1.3	1.5
2005	1.0	1.1	1.2	1.3	1.5	1.6	1.6	1.6	1.3	1.1	1.3	1.3	1.4	1.4	1.5
2006	0.9	1.1	1.2	1.3	1.5	1.6	1.5	1.6	1.2	1.1	1.2	1.2	1.3	1.3	1.5
2007	0.9	1.1	1.2	1.3	1.4	1.5	1.5	1.5	1.2	1.1	1.2	1.2	1.3	1.3	1.4
2008	0.9	1.1	1.2	1.3	1.5	1.6	1.5	1.6	1.2	1.1	1.2	1.2	1.3	1.3	1.4

*Beta and equity risk premium estimated using the Standard and Poor's 500 index.

Mid-Cap Size Premia* (in percent)

2009 Ibbotson SBBI Valuation Edition Yearbook: Appendix A, Table A-4

End	Start Date														
Date	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
1926															
1927															
1928															
1929															
1930															
1931															
1932															
1933															
1934															
1935															
1936															
1937															
1938															
1939															
1940															
1941															
1942															
1943															
1944															
1945	7.2														
1946	5.6	5.4													
1947	3.9	3.4	3.9												
1948	3.0	2.6	2.9	2.1											
1949	2.8	2.4	2.6	1.9	1.0										
1950	2.0	1.6	1.6	0.8	0.0	-3.0									
1951	1.2	0.7	0.5	-0.2	-1.1	-3.8	-3.9								
1952	0.5	0.1	-0.1	-0.8	-1.7	-4.2	-4.2	-3.6							
1953	0.7	0.3	0.1	-0.5	-1.3	-3.4	-3.3	-2.7	-2.0						
1954	0.8	0.5	0.4	-0.1	-0.8	-2.7	-2.2	-1.4	-0.3	-0.6					
1955	0.3	0.1	-0.1	-0.6	-1.3	-3.1	-2.3	-1.6	-0.1	-0.4	-0.1				
1956	0.7	0.5	0.4	0.0	-0.7	-2.3	-1.5	-0.8	0.6	0.4	0.5	1.6			
1957	0.7	0.5	0.4	0.0	-0.6	-2.2	-1.6	-1.0	0.0	-0.4	-0.5	0.1	0.9		
1958	1.2	1.2	1.1	0.8	0.3	-1.0	-0.3	0.4	1.5	1.5	1.7	2.7	3.8	4.9	
1959	1.4	1.4	1.3	1.0	0.6	-0.7	0.1	0.8	1.9	1.8	2.1	3.0	4.0	4.9	3.5
1960	1.5	1.4	1.4	1.1	0.7	-0.5	0.2	0.8	1.7	1.6	1.8	2.5	3.3	3.9	2.7
1961	1.4	1.4	1.3	1.1	0.7	-0.4	0.3	0.8	1.7	1.6	1.8	2.5	3.3	3.8	2.8
1962	1.0	1.0	0.9	0.6	0.2	-0.8	-0.4	0.0	0.6	0.4	0.6	1.1	1.6	1.8	1.0
1963	0.7	0.6	0.6	0.2	-0.1	-1.1	-0.7	-0.3	0.2	0.0	0.1	0.5	1.0	1.1	0.3
1964	0.7	0.7	0.6	0.3	-0.1	-1.0	-0.6	-0.2	0.3	0.2	0.3	0.7	1.1	1.2	0.5
1965	1.2	1.2	1.1	0.9	0.6	-0.3	0.1	0.5	1.1	1.0	1.1	1.6	2.0	2.2	1.6
1966	1.3	1.3	1.3	1.0	0.7	-0.1	0.3	0.7	1.1	1.0	1.2	1.6	2.0	2.2	1.7
1967	1.8	1.8	1.8	1.6	1.3	0.6	1.0	1.4	1.8	1.8	2.0	2.4	2.9	3.1	2.7
1968	2.0	2.0	2.0	1.8	1.6	0.9	1.3	1.6	2.1	2.0	2.2	2.7	3.1	3.3	3.1
1969	1.6	1.6	1.6	1.3	1.1	0.4	0.7	1.0	1.4	1.3	1.5	1.9	2.3	2.4	2.2
1970	1.2	1.1	1.1	0.9	0.6	0.0	0.2	0.4	0.7	0.6	0.8	1.1	1.5	1.6	1.4

*Beta and equity risk premium estimated using the Standard and Poor's 500 index.

Mid-Cap Size Premia* (in percent)

2009 Ibbotson SBBI Valuation Edition Yearbook: Appendix A, Table A-4

End	Start Date														
Date	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
1971	1.3	1.2	1.2	1.0	0.8	0.2	0.3	0.6	0.9	0.8	1.0	1.3	1.7	1.7	1.7
1972	0.9	0.8	0.8	0.6	0.3	-0.3	-0.1	0.1	0.4	0.3	0.4	0.7	1.1	1.1	1.0
1973	0.4	0.2	0.2	0.0	-0.3	-0.9	-0.8	-0.6	-0.4	-0.5	-0.4	-0.1	0.2	0.2	0.1
1974	0.7	0.6	0.6	0.3	0.1	-0.5	-0.4	-0.2	0.0	-0.1	0.0	0.3	0.6	0.6	0.6
1975	1.1	1.0	1.0	0.7	0.5	0.0	0.1	0.3	0.5	0.4	0.6	0.9	1.2	1.2	1.3
1976	1.4	1.3	1.3	1.1	0.9	0.4	0.5	0.8	1.0	0.9	1.1	1.4	1.7	1.8	1.8
1977	1.7	1.6	1.7	1.5	1.3	0.8	1.0	1.2	1.4	1.4	1.5	1.8	2.2	2.2	2.3
1978	1.8	1.7	1.7	1.5	1.4	0.9	1.0	1.2	1.4	1.4	1.6	1.9	2.2	2.3	2.4
1979	2.0	2.0	2.0	1.8	1.7	1.2	1.4	1.6	1.8	1.8	2.0	2.3	2.6	2.7	2.8
1980	1.9	1.8	1.9	1.7	1.5	1.1	1.2	1.4	1.6	1.6	1.8	2.1	2.4	2.5	2.5
1981	2.1	2.1	2.1	1.9	1.8	1.4	1.5	1.7	1.9	1.9	2.1	2.4	2.7	2.8	2.9
1982	2.1	2.1	2.1	1.9	1.8	1.4	1.5	1.7	1.9	1.9	2.1	2.4	2.7	2.7	2.8
1983	2.1	2.1	2.1	2.0	1.8	1.5	1.6	1.8	1.9	1.9	2.1	2.4	2.7	2.7	2.8
1984	1.9	1.9	1.9	1.7	1.6	1.2	1.3	1.5	1.7	1.7	1.8	2.1	2.4	2.4	2.5
1985	1.8	1.8	1.8	1.6	1.5	1.1	1.2	1.4	1.6	1.6	1.7	2.0	2.2	2.3	2.3
1986	1.8	1.7	1.7	1.6	1.4	1.1	1.2	1.3	1.5	1.5	1.6	1.9	2.1	2.2	2.2
1987	1.7	1.6	1.6	1.5	1.3	1.0	1.1	1.2	1.4	1.4	1.5	1.7	2.0	2.0	2.1
1988	1.7	1.7	1.7	1.6	1.4	1.1	1.2	1.3	1.5	1.5	1.6	1.8	2.1	2.1	2.1
1989	1.6	1.5	1.5	1.4	1.2	0.9	1.0	1.1	1.3	1.2	1.4	1.6	1.8	1.8	1.8
1990	1.4	1.3	1.3	1.2	1.0	0.7	0.8	0.9	1.0	1.0	1.1	1.3	1.5	1.6	1.6
1991	1.5	1.5	1.5	1.3	1.2	0.9	1.0	1.1	1.2	1.2	1.3	1.5	1.8	1.8	1.8
1992	1.7	1.6	1.6	1.5	1.4	1.0	1.1	1.3	1.4	1.4	1.5	1.7	1.9	2.0	2.0
1993	1.7	1.7	1.7	1.6	1.5	1.1	1.2	1.4	1.5	1.5	1.6	1.8	2.0	2.1	2.1
1994	1.7	1.6	1.6	1.5	1.4	1.1	1.1	1.3	1.4	1.4	1.5	1.7	1.9	1.9	2.0
1995	1.5	1.5	1.5	1.4	1.2	0.9	1.0	1.1	1.3	1.3	1.4	1.5	1.7	1.7	1.8
1996	1.4	1.3	1.4	1.2	1.1	0.8	0.9	1.0	1.1	1.1	1.2	1.4	1.5	1.6	1.6
1997	1.2	1.2	1.2	1.0	0.9	0.6	0.7	0.8	0.9	0.9	1.0	1.2	1.3	1.3	1.3
1998	0.8	0.7	0.7	0.6	0.4	0.1	0.2	0.3	0.4	0.4	0.4	0.6	0.7	0.7	0.7
1999	0.9	0.8	0.8	0.7	0.6	0.3	0.3	0.5	0.6	0.5	0.6	0.8	0.9	0.9	0.9
2000	1.0	0.9	0.9	0.8	0.7	0.4	0.4	0.6	0.7	0.6	0.7	0.9	1.0	1.0	1.0
2001	1.1	1.0	1.1	0.9	0.8	0.5	0.6	0.7	0.8	0.8	0.8	1.0	1.2	1.2	1.1
2002	1.2	1.2	1.2	1.0	0.9	0.6	0.7	0.8	0.9	0.9	1.0	1.1	1.3	1.3	1.3
2003	1.4	1.3	1.3	1.2	1.1	0.8	0.9	1.0	1.1	1.1	1.2	1.3	1.5	1.5	1.5
2004	1.4	1.4	1.4	1.3	1.2	0.9	1.0	1.1	1.2	1.2	1.2	1.4	1.5	1.6	1.6
2005	1.5	1.5	1.5	1.4	1.2	1.0	1.0	1.2	1.3	1.2	1.3	1.5	1.6	1.6	1.6
2006	1.4	1.4	1.4	1.3	1.2	0.9	1.0	1.1	1.2	1.2	1.3	1.4	1.5	1.6	1.6
2007	1.4	1.4	1.4	1.2	1.1	0.9	0.9	1.1	1.2	1.1	1.2	1.4	1.5	1.5	1.5
2008	1.4	1.3	1.3	1.2	1.1	0.9	0.9	1.0	1.1	1.1	1.2	1.3	1.5	1.5	1.5

*Beta and equity risk premium estimated using the Standard and Poor's 500 index.

Mid-Cap Size Premia* (in percent)

2009 Ibbotson SBBI Valuation Edition Yearbook: Appendix A, Table A-4

End	Start Date														
Date	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
1926															
1927															
1928															
1929															
1930															
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1952															
1953															
1954															
1955															
1956															
1957															
1958															
1959															
1960	4.2														
1961	3.9	3.7													
1962	2.3	2.1	2.4												
1963	1.2	0.8	0.8	-1.0											
1964	1.3	0.9	0.9	-0.7	-1.5										
1965	2.4	2.2	2.3	1.2	0.8	0.3									
1966	2.5	2.4	2.6	1.7	1.5	1.2	1.5								
1967	3.6	3.5	3.8	3.1	3.0	3.0	3.6	5.1							
1968	3.9	3.9	4.1	3.6	3.6	3.6	4.3	5.5	8.1						
1969	3.1	3.0	3.1	2.7	2.7	2.6	3.1	3.7	5.9	7.3					
1970	2.3	2.2	2.2	1.9	1.8	1.6	2.1	2.5	4.3	5.2	4.0				

*Beta and equity risk premium estimated using the Standard and Poor's 500 index.

Mid-Cap Size Premia* (in percent)

2009 Ibbotson SBBI Valuation Edition Yearbook: Appendix A, Table A-4

End Date	Start Date 1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
1971	2.5	2.4	2.5	2.1	2.1	2.0	2.4	2.8	4.4	5.2	4.1	3.3			
1972	1.7	1.5	1.5	1.1	1.0	0.8	1.0	1.2	2.5	2.9	1.7	0.6	-1.5		
1973	0.9	0.8	0.6	0.4	0.2	0.0	0.3	0.3	1.5	1.9	0.8	-0.4	-2.0	-4.0	
1974	1.3	1.3	1.3	0.9	0.8	0.7	0.9	1.2	2.2	2.5	1.3	0.7	-1.0	-2.8	-2.8
1975	2.0	2.0	2.0	1.8	1.7	1.6	1.9	2.2	3.2	3.6	2.7	2.3	1.0	-0.1	0.4
1976	2.5	2.5	2.6	2.4	2.4	2.3	2.6	2.9	3.9	4.3	3.6	3.3	2.3	1.5	2.2
1977	3.0	3.1	3.2	3.0	3.0	3.0	3.3	3.7	4.7	5.1	4.5	4.3	3.5	2.9	3.6
1978	3.1	3.1	3.2	3.0	3.1	3.1	3.4	3.7	4.6	5.0	4.5	4.3	3.6	3.0	3.7
1979	3.5	3.5	3.6	3.5	3.6	3.6	3.9	4.2	5.1	5.5	5.1	4.9	4.3	3.9	4.6
1980	3.2	3.2	3.3	3.1	3.2	3.2	3.4	3.7	4.5	4.8	4.4	4.2	3.5	3.1	3.7
1981	3.5	3.6	3.6	3.5	3.6	3.6	3.9	4.2	5.0	5.3	4.8	4.7	4.2	3.8	4.4
1982	3.4	3.5	3.6	3.4	3.5	3.5	3.8	4.1	4.8	5.1	4.7	4.5	4.0	3.6	4.2
1983	3.4	3.5	3.5	3.4	3.4	3.5	3.7	4.0	4.6	4.9	4.5	4.4	3.8	3.5	4.0
1984	3.1	3.1	3.2	3.0	3.0	3.0	3.2	3.5	4.1	4.3	3.9	3.8	3.2	2.9	3.3
1985	2.9	2.9	2.9	2.8	2.8	2.8	3.0	3.2	3.8	3.9	3.5	3.4	2.8	2.5	2.9
1986	2.7	2.7	2.8	2.6	2.6	2.6	2.7	2.9	3.5	3.6	3.2	3.1	2.5	2.2	2.6
1987	2.5	2.5	2.6	2.4	2.4	2.4	2.5	2.7	3.2	3.4	2.9	2.8	2.3	1.9	2.3
1988	2.6	2.6	2.7	2.5	2.5	2.5	2.6	2.8	3.3	3.4	3.0	2.9	2.4	2.0	2.4
1989	2.3	2.3	2.3	2.1	2.1	2.1	2.2	2.4	2.8	2.9	2.5	2.3	1.8	1.5	1.8
1990	2.0	2.0	2.0	1.9	1.8	1.8	1.9	2.0	2.4	2.5	2.1	2.0	1.5	1.1	1.4
1991	2.2	2.2	2.2	2.1	2.0	2.0	2.1	2.3	2.7	2.8	2.4	2.2	1.8	1.5	1.8
1992	2.4	2.4	2.4	2.3	2.2	2.2	2.3	2.5	2.9	3.0	2.6	2.5	2.1	1.8	2.1
1993	2.5	2.5	2.5	2.4	2.4	2.3	2.4	2.6	3.0	3.1	2.7	2.6	2.2	1.9	2.2
1994	2.3	2.3	2.4	2.2	2.2	2.2	2.3	2.4	2.8	2.9	2.5	2.4	2.0	1.7	2.0
1995	2.1	2.1	2.1	2.0	2.0	1.9	2.0	2.1	2.5	2.6	2.2	2.1	1.7	1.4	1.7
1996	1.9	1.9	1.9	1.7	1.7	1.7	1.7	1.9	2.2	2.2	1.9	1.8	1.4	1.1	1.3
1997	1.6	1.6	1.6	1.4	1.4	1.4	1.4	1.5	1.8	1.9	1.5	1.4	1.0	0.7	0.9
1998	1.0	1.0	1.0	0.8	0.7	0.6	0.7	0.8	1.0	1.1	0.7	0.5	0.1	-0.2	0.0
1999	1.2	1.1	1.1	1.0	0.9	0.8	0.9	1.0	1.2	1.3	0.9	0.8	0.4	0.1	0.3
2000	1.3	1.2	1.3	1.1	1.0	1.0	1.0	1.1	1.4	1.4	1.1	0.9	0.5	0.3	0.5
2001	1.4	1.4	1.4	1.3	1.2	1.2	1.2	1.3	1.6	1.6	1.3	1.2	0.8	0.5	0.7
2002	1.6	1.5	1.6	1.4	1.4	1.3	1.4	1.5	1.7	1.8	1.5	1.3	1.0	0.7	0.9
2003	1.8	1.7	1.8	1.6	1.6	1.5	1.6	1.7	1.9	2.0	1.7	1.6	1.2	1.0	1.2
2004	1.8	1.8	1.9	1.7	1.7	1.6	1.7	1.8	2.0	2.1	1.8	1.7	1.4	1.2	1.4
2005	1.9	1.9	1.9	1.8	1.8	1.7	1.8	1.9	2.1	2.2	1.9	1.8	1.5	1.3	1.5
2006	1.8	1.8	1.8	1.7	1.7	1.6	1.7	1.8	2.0	2.1	1.8	1.7	1.4	1.2	1.4
2007	1.8	1.8	1.8	1.6	1.6	1.6	1.6	1.7	2.0	2.0	1.7	1.6	1.3	1.1	1.3
2008	1.8	1.7	1.8	1.6	1.6	1.6	1.6	1.7	2.0	2.0	1.7	1.6	1.3	1.2	1.3

*Beta and equity risk premium estimated using the Standard and Poor's 500 index.

Mid-Cap Size Premia* (in percent)

2009 Ibbotson SBBI Valuation Edition Yearbook: Appendix A, Table A-4

End Date	Start Date 1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
1971															
1972															
1973															
1974															
1975	1.5														
1976	3.5	3.1													
1977	4.9	4.8	8.1												
1978	4.8	4.7	7.5	10.5											
1979	5.7	5.7	8.3	11.0	11.3										
1980	4.7	4.6	6.6	9.0	8.7	7.9									
1981	5.3	5.3	7.2	9.2	9.2	8.5	7.5								
1982	5.0	5.0	6.6	8.4	8.4	7.6	6.6	5.3							
1983	4.8	4.7	6.2	7.8	7.7	7.0	6.0	4.8	5.0						
1984	4.0	3.9	5.2	6.5	6.3	5.4	4.4	3.2	3.0	1.1					
1985	3.5	3.4	4.5	5.7	5.4	4.6	3.6	2.4	2.2	0.5	1.3				
1986	3.1	2.9	4.0	5.1	4.8	4.0	3.0	1.9	1.7	0.2	0.7	-1.2			
1987	2.8	2.6	3.5	4.5	4.3	3.4	2.4	1.5	1.2	-0.3	0.1	-1.6	-2.4		
1988	2.9	2.7	3.6	4.5	4.3	3.5	2.6	1.8	1.5	0.3	0.7	-0.7	-1.1	-2.1	
1989	2.3	2.1	2.8	3.8	3.5	2.7	1.8	1.0	0.7	-0.5	-0.2	-1.4	-1.9	-2.9	-1.8
1990	1.8	1.6	2.3	3.1	2.8	2.0	1.2	0.3	0.0	-1.1	-1.0	-2.2	-2.8	-3.6	-3.0
1991	2.2	2.0	2.7	3.5	3.2	2.5	1.8	1.0	0.8	-0.2	0.0	-1.0	-1.3	-1.9	-1.1
1992	2.5	2.3	3.0	3.8	3.5	2.9	2.2	1.5	1.3	0.5	0.7	-0.1	-0.3	-0.7	0.2
1993	2.6	2.5	3.1	3.9	3.7	3.1	2.4	1.8	1.6	0.9	1.1	0.4	0.3	-0.1	0.8
1994	2.4	2.2	2.8	3.5	3.3	2.7	2.1	1.5	1.3	0.6	0.8	0.1	-0.1	-0.4	0.4
1995	2.0	1.9	2.4	3.1	2.9	2.3	1.7	1.1	0.9	0.2	0.4	-0.2	-0.4	-0.7	-0.1
1996	1.7	1.5	2.0	2.7	2.5	1.9	1.3	0.7	0.5	-0.1	0.0	-0.6	-0.8	-1.1	-0.6
1997	1.3	1.1	1.6	2.2	2.0	1.4	0.8	0.3	0.1	-0.6	-0.4	-1.0	-1.2	-1.6	-1.0
1998	0.3	0.1	0.5	1.1	0.8	0.3	-0.4	-1.0	-1.2	-1.9	-1.8	-2.5	-2.8	-3.2	-2.8
1999	0.6	0.4	0.8	1.4	1.1	0.6	0.0	-0.5	-0.7	-1.4	-1.3	-1.9	-2.1	-2.5	-2.1
2000	0.8	0.6	1.0	1.5	1.3	0.8	0.3	-0.3	-0.4	-1.0	-0.9	-1.5	-1.7	-2.0	-1.6
2001	1.0	0.9	1.3	1.8	1.6	1.1	0.5	0.1	-0.1	-0.7	-0.6	-1.1	-1.2	-1.5	-1.1
2002	1.2	1.0	1.4	1.9	1.8	1.3	0.8	0.3	0.2	-0.4	-0.3	-0.8	-0.9	-1.1	-0.8
2003	1.5	1.3	1.7	2.2	2.1	1.6	1.2	0.7	0.6	0.1	0.2	-0.2	-0.3	-0.5	-0.1
2004	1.6	1.5	1.9	2.4	2.2	1.8	1.3	0.9	0.8	0.4	0.5	0.1	0.0	-0.2	0.2
2005	1.8	1.6	2.0	2.5	2.4	1.9	1.5	1.1	1.0	0.6	0.7	0.3	0.3	0.1	0.5
2006	1.6	1.5	1.9	2.3	2.2	1.8	1.4	1.0	0.9	0.5	0.6	0.2	0.1	0.0	0.4
2007	1.6	1.4	1.8	2.2	2.1	1.7	1.3	0.9	0.8	0.4	0.5	0.2	0.1	0.0	0.3
2008	1.5	1.4	1.8	2.2	2.0	1.6	1.2	0.9	0.8	0.4	0.5	0.1	0.0	-0.1	0.2

*Beta and equity risk premium estimated using the Standard and Poor's 500 index.

Mid-Cap Size Premia* (in percent)

2009 Ibbotson SBBI Valuation Edition Yearbook: Appendix A, Table A-4

End	Start Date														
Date	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1971															
1972															
1973															
1974															
1975															
1976															
1977															
1978															
1979															
1980															
1981															
1982															
1983															
1984															
1985															
1986															
1987															
1988															
1989															
1990	-3.3														
1991	-1.0	-0.8													
1992	0.4	0.8	1.7												
1993	1.1	1.5	2.4	1.9											
1994	0.6	0.9	1.6	1.0	2.8										
1995	0.1	0.3	0.8	0.2	1.3	3.6									
1996	-0.5	-0.4	0.1	-0.5	0.2	2.3	0.9								
1997	-1.0	-0.9	-0.3	-0.9	-0.4	1.8	0.5	-1.2							
1998	-2.9	-3.1	-2.9	-3.7	-3.5	-2.4	-4.2	-6.6	-9.3						
1999	-2.1	-2.1	-1.9	-2.6	-2.3	-1.2	-2.6	-4.4	-6.2	-6.9					
2000	-1.6	-1.6	-1.3	-1.8	-1.5	-0.4	-1.7	-3.0	-4.3	-4.3	-4.7				
2001	-1.1	-1.1	-0.8	-1.3	-0.8	0.0	-1.1	-2.2	-3.2	-3.1	-3.1	-2.5			
2002	-0.7	-0.7	-0.4	-0.8	-0.3	0.4	-0.6	-1.5	-2.4	-2.2	-2.1	-1.4	0.5		
2003	0.0	0.1	0.4	0.0	0.5	1.3	0.5	-0.3	-0.9	-0.6	-0.2	0.6	2.4	7.6	
2004	0.3	0.4	0.7	0.4	0.9	1.6	0.9	0.3	-0.3	0.1	0.5	1.3	3.0	7.6	7.2
2005	0.6	0.7	1.0	0.8	1.2	1.9	1.3	0.7	0.3	0.6	1.1	1.9	3.4	7.4	7.2
2006	0.4	0.6	0.8	0.6	1.0	1.6	1.0	0.5	0.0	0.4	0.8	1.4	2.7	6.2	5.7
2007	0.4	0.5	0.7	0.5	0.9	1.5	0.9	0.4	0.0	0.3	0.6	1.2	2.4	5.4	4.9
2008	0.3	0.4	0.6	0.4	0.8	1.3	0.7	0.3	-0.1	0.1	0.5	1.2	2.4	5.2	4.9

*Beta and equity risk premium estimated using the Standard and Poor's 500 index.

Mid-Cap Size Premia* (in percent)

2009 Ibbotson SBBI Valuation Edition Yearbook: Appendix A, Table A-4

End	Start Date			
Date	2001	2002	2003	2004
1971				
1972				
1973				
1974				
1975				
1976				
1977				
1978				
1979				
1980				
1981				
1982				
1983				
1984				
1985				
1986				
1987				
1988				
1989				
1990				
1991				
1992				
1993				
1994				
1995				
1996				
1997				
1998				
1999				
2000				
2001				
2002				
2003				
2004				
2005	8.3			
2006	6.3	5.4		
2007	5.3	4.4	2.8	
2008	5.3	4.3	3.8	3.0

*Beta and equity risk premium estimated using the Standard and Poor's 500 index.

Low-Cap Size Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-5

End Date	Start Date 1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
1926															
1927															
1928															
1929															
1930	-16.0														
1931	-14.2	-14.5													
1932	-10.7	-10.2	-9.2												
1933	-2.9	-1.3	1.3	6.5											
1934	-0.2	1.6	4.4	9.4	17.0										
1935	-0.3	1.2	3.6	7.7	13.4	17.0									
1936	0.5	1.9	4.1	7.6	12.5	15.4	16.1								
1937	0.2	1.5	3.4	6.6	10.8	13.0	13.3	12.6							
1938	0.2	1.4	3.1	5.9	9.5	11.3	11.3	10.3	3.7						
1939	0.4	1.5	3.2	5.8	9.0	10.5	10.2	9.1	3.5	0.1					
1940	0.9	2.0	3.5	6.0	9.0	10.3	10.1	9.4	4.6	2.0	3.6				
1941	1.2	2.3	3.8	6.0	8.8	10.0	9.9	9.3	5.1	2.8	4.2	4.0			
1942	1.3	2.2	3.6	5.7	8.2	9.2	9.1	8.4	4.6	2.6	3.6	3.2	3.9		
1943	2.5	3.5	4.9	6.9	9.2	10.3	10.2	9.6	6.3	4.8	6.0	6.0	7.0	8.7	
1944	3.3	4.3	5.6	7.6	9.8	10.8	10.7	10.2	7.2	6.0	7.2	7.4	8.4	10.0	12.1
1945	4.0	5.0	6.3	8.1	10.2	11.2	11.0	10.5	7.8	6.9	8.1	8.3	9.3	10.8	13.5
1946	3.8	4.7	5.9	7.7	9.6	10.5	10.3	9.9	7.3	6.4	7.4	7.5	8.3	9.5	11.3
1947	3.2	4.1	5.2	6.7	8.5	9.3	9.1	8.5	6.1	5.1	6.0	5.9	6.5	7.4	8.6
1948	2.7	3.4	4.4	5.9	7.5	8.2	8.0	7.5	5.1	4.2	4.8	4.7	5.2	5.8	6.8
1949	2.4	3.2	4.1	5.5	7.0	7.6	7.3	6.8	4.6	3.7	4.3	4.0	4.5	5.0	5.9
1950	2.2	2.9	3.8	5.0	6.4	7.0	6.7	6.1	4.0	3.2	3.7	3.4	3.8	4.2	5.3
1951	1.6	2.2	3.0	4.2	5.5	5.9	5.6	5.0	2.9	2.2	2.5	2.2	2.5	2.8	3.9
1952	1.0	1.6	2.4	3.4	4.6	5.1	4.7	4.1	2.1	1.4	1.7	1.3	1.5	1.9	2.9
1953	1.0	1.5	2.3	3.3	4.4	4.8	4.5	3.9	2.0	1.4	1.6	1.2	1.5	1.8	2.7
1954	0.7	1.2	1.9	2.8	3.9	4.2	3.9	3.3	1.5	1.0	1.2	0.8	1.0	1.4	2.6
1955	0.1	0.6	1.2	2.1	3.0	3.4	3.0	2.5	0.8	0.3	0.4	0.0	0.3	0.7	2.0
1956	0.1	0.6	1.2	2.0	3.0	3.3	2.9	2.5	1.0	0.5	0.6	0.1	0.5	1.0	2.2
1957	0.1	0.5	1.1	1.9	2.8	3.1	2.8	2.4	0.9	0.4	0.5	0.0	0.4	0.8	1.9
1958	0.3	0.8	1.3	2.1	2.9	3.2	2.9	2.5	1.2	0.8	0.9	0.4	0.8	1.3	2.5
1959	0.4	0.8	1.4	2.1	2.9	3.3	2.9	2.6	1.3	0.9	1.0	0.6	1.0	1.5	2.7
1960	0.3	0.8	1.3	2.0	2.8	3.1	2.8	2.5	1.2	0.9	0.9	0.5	0.9	1.4	2.5
1961	0.2	0.6	1.1	1.8	2.6	2.9	2.5	2.2	1.0	0.7	0.8	0.4	0.7	1.2	2.3
1962	0.1	0.5	1.0	1.6	2.4	2.6	2.4	2.0	0.9	0.5	0.6	0.2	0.5	0.9	1.8
1963	-0.1	0.3	0.7	1.3	2.0	2.3	2.0	1.7	0.6	0.2	0.3	-0.1	0.2	0.6	1.5
1964	-0.2	0.2	0.6	1.2	1.9	2.1	1.8	1.5	0.5	0.1	0.2	-0.2	0.1	0.5	1.4
1965	0.3	0.7	1.1	1.7	2.4	2.6	2.4	2.1	1.1	0.8	0.8	0.5	0.8	1.3	2.2
1966	0.5	0.8	1.3	1.9	2.5	2.8	2.5	2.3	1.3	1.0	1.0	0.7	1.0	1.4	2.2
1967	1.3	1.7	2.1	2.7	3.3	3.6	3.4	3.2	2.2	2.0	2.1	1.8	2.2	2.6	3.4
1968	1.7	2.1	2.5	3.1	3.7	4.0	3.8	3.6	2.7	2.5	2.6	2.4	2.7	3.1	3.9
1969	1.4	1.8	2.2	2.8	3.4	3.6	3.4	3.2	2.3	2.0	2.1	1.9	2.2	2.5	3.2
1970	1.1	1.4	1.8	2.4	3.0	3.2	3.0	2.7	1.8	1.6	1.6	1.4	1.7	1.9	2.5

*Beta and equity risk premium estimated using the Standard and Poor's 500 index.

Low-Cap Size Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-5

End Date	Start Date 1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
1971	1.1	1.5	1.8	2.4	3.0	3.2	3.0	2.8	1.9	1.6	1.7	1.5	1.7	2.0	2.5
1972	0.7	1.1	1.4	2.0	2.5	2.7	2.5	2.2	1.4	1.1	1.2	1.0	1.2	1.4	1.9
1973	0.4	0.7	1.0	1.6	2.1	2.3	2.0	1.8	0.9	0.6	0.6	0.4	0.6	0.7	1.1
1974	0.7	1.0	1.3	1.8	2.4	2.6	2.4	2.2	1.4	1.1	1.1	0.9	1.1	1.2	1.6
1975	1.0	1.3	1.6	2.1	2.7	2.9	2.7	2.5	1.7	1.4	1.4	1.2	1.4	1.6	2.0
1976	1.4	1.7	2.0	2.5	3.1	3.3	3.1	2.9	2.1	1.9	1.9	1.7	2.0	2.1	2.5
1977	1.9	2.2	2.6	3.1	3.6	3.8	3.7	3.5	2.8	2.5	2.6	2.4	2.6	2.8	3.2
1978	2.1	2.4	2.7	3.2	3.8	4.0	3.8	3.7	2.9	2.7	2.7	2.6	2.8	3.0	3.3
1979	2.5	2.8	3.1	3.6	4.2	4.4	4.2	4.1	3.4	3.1	3.2	3.1	3.3	3.5	3.8
1980	2.3	2.6	3.0	3.4	4.0	4.2	4.0	3.9	3.2	3.0	3.0	2.9	3.1	3.3	3.6
1981	2.5	2.8	3.2	3.6	4.1	4.4	4.2	4.1	3.4	3.2	3.3	3.1	3.3	3.5	3.8
1982	2.6	2.9	3.2	3.7	4.2	4.4	4.3	4.2	3.5	3.3	3.3	3.2	3.4	3.6	3.9
1983	2.6	2.9	3.2	3.7	4.2	4.4	4.3	4.1	3.5	3.3	3.4	3.2	3.4	3.6	3.9
1984	2.4	2.7	3.0	3.5	4.0	4.2	4.1	3.9	3.3	3.1	3.1	3.0	3.2	3.4	3.7
1985	2.3	2.6	2.9	3.3	3.8	4.0	3.9	3.8	3.1	2.9	3.0	2.9	3.1	3.2	3.5
1986	2.1	2.4	2.7	3.1	3.6	3.8	3.6	3.5	2.9	2.7	2.8	2.6	2.8	3.0	3.3
1987	1.9	2.2	2.5	2.9	3.3	3.5	3.4	3.3	2.7	2.5	2.5	2.4	2.6	2.7	3.0
1988	2.0	2.3	2.6	3.0	3.4	4.0	3.5	3.4	2.8	2.6	2.6	2.5	2.7	2.8	3.1
1989	1.7	2.0	2.3	2.6	3.1	3.2	3.1	3.1	2.5	2.3	2.3	2.2	2.4	2.5	2.8
1990	1.5	1.8	2.0	2.4	2.8	3.0	2.9	2.8	2.2	2.0	2.0	1.9	2.1	2.2	2.4
1991	1.7	1.9	2.2	2.6	3.0	3.2	3.1	3.0	2.4	2.2	2.3	2.1	2.3	2.4	2.7
1992	1.8	2.1	2.3	2.7	3.1	3.3	3.2	3.1	2.5	2.4	2.4	2.3	2.4	2.6	2.8
1993	1.9	2.1	2.4	2.8	3.2	3.3	3.2	3.2	2.6	2.4	2.5	2.3	2.5	2.7	2.9
1994	1.9	2.1	2.4	2.7	3.1	3.3	3.2	3.1	2.6	2.4	2.4	2.3	2.5	2.6	2.8
1995	1.6	1.9	2.1	2.4	2.8	3.0	2.9	2.8	2.3	2.1	2.2	2.0	2.2	2.3	2.6
1996	1.5	1.7	1.9	2.3	2.7	2.8	2.7	2.7	2.1	2.0	2.0	1.9	2.0	2.2	2.4
1997	1.4	1.6	1.8	2.1	2.5	2.6	2.5	2.5	2.0	1.9	1.9	1.7	1.9	2.1	2.3
1998	0.9	1.1	1.3	1.6	2.0	2.1	2.0	2.0	1.5	1.3	1.3	1.2	1.3	1.5	1.7
1999	1.0	1.2	1.4	1.7	2.1	2.2	2.1	2.1	1.6	1.4	1.5	1.3	1.5	1.6	1.9
2000	1.0	1.2	1.5	1.8	2.1	2.3	2.2	2.2	1.7	1.5	1.5	1.4	1.6	1.7	1.9
2001	1.4	1.6	1.8	2.1	2.5	2.6	2.6	2.5	2.1	1.9	1.9	1.8	2.0	2.1	2.3
2002	1.5	1.7	1.9	2.2	2.6	2.7	2.7	2.7	2.2	2.0	2.0	1.9	2.1	2.2	2.4
2003	1.7	1.9	2.1	2.4	2.8	2.9	2.9	2.9	2.4	2.2	2.3	2.1	2.3	2.4	2.6
2004	1.8	2.0	2.2	2.5	2.8	3.0	2.9	2.9	2.5	2.3	2.3	2.2	2.4	2.5	2.7
2005	1.8	2.0	2.2	2.5	2.8	3.0	2.9	2.9	2.4	2.3	2.3	2.2	2.4	2.5	2.7
2006	1.7	1.9	2.1	2.4	2.8	2.9	2.8	2.8	2.4	2.2	2.3	2.1	2.3	2.4	2.6
2007	1.6	1.8	2.0	2.3	2.6	2.8	2.7	2.7	2.3	2.1	2.2	2.0	2.2	2.3	2.5
2008	1.7	1.9	2.1	2.4	2.7	2.9	2.8	2.8	2.3	2.2	2.2	2.1	2.2	2.3	2.5

*Beta and equity risk premium estimated using the Standard and Poor's 500 index.

Low-Cap Size Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-5

End Date	Start Date 1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
1926															
1927															
1928															
1929															
1930															
1931															
1932															
1933															
1934															
1935															
1936															
1937															
1938															
1939															
1940															
1941															
1942															
1943															
1944															
1945	14.1														
1946	11.4	12.5													
1947	8.3	8.5	8.5												
1948	6.6	6.7	6.6	3.8											
1949	5.6	5.5	5.2	2.8	-0.3										
1950	4.9	4.8	4.2	2.2	-0.5	-4.5									
1951	3.4	3.1	2.4	0.5	-2.0	-5.7	-5.9								
1952	2.4	2.2	1.4	-0.4	-2.8	-6.0	-6.1	-5.0							
1953	2.3	2.1	1.4	-0.3	-2.4	-5.2	-5.1	-4.1	-3.3						
1954	2.3	2.2	1.5	0.1	-1.8	-4.3	-3.7	-2.5	-1.3	-0.8					
1955	1.9	1.9	1.2	-0.1	-1.9	-4.2	-3.3	-2.0	-0.3	0.4	-0.2				
1956	2.2	2.3	1.8	0.6	-1.1	-3.2	-2.2	-1.0	0.8	1.3	0.7	2.6			
1957	1.8	1.9	1.4	0.2	-1.4	-3.5	-2.7	-1.8	-0.4	-0.4	-1.3	-0.3	0.5		
1958	2.6	2.7	2.2	1.2	-0.1	-1.9	-0.9	0.1	1.6	2.0	1.7	3.1	4.5	6.2	
1959	2.8	2.9	2.5	1.5	0.3	-1.3	-0.3	0.7	2.1	2.6	2.3	3.7	4.9	6.4	4.8
1960	2.5	2.6	2.2	1.3	0.1	-1.4	-0.6	0.3	1.5	1.8	1.4	2.5	3.4	4.4	2.8
1961	2.3	2.4	2.0	1.2	0.1	-1.3	-0.5	0.3	1.3	1.6	1.4	2.4	3.2	4.0	2.8
1962	1.8	1.8	1.4	0.5	-0.6	-2.0	-1.5	-0.8	-0.1	-0.1	-0.4	0.3	0.9	1.2	0.2
1963	1.5	1.5	1.1	0.2	-0.8	-2.1	-1.6	-1.0	-0.3	-0.3	-0.6	0.0	0.6	0.8	-0.1
1964	1.4	1.4	1.0	0.2	-0.8	-2.0	-1.5	-0.9	-0.3	-0.2	-0.5	0.1	0.6	0.8	0.0
1965	2.1	2.2	1.8	1.1	0.2	-0.9	-0.4	0.3	0.9	1.1	0.9	1.6	2.1	2.4	1.8
1966	2.2	2.2	1.9	1.2	0.3	-0.7	-0.3	0.3	0.9	1.0	0.8	1.4	2.0	2.2	1.7
1967	3.4	3.5	3.2	2.6	1.8	0.9	1.4	2.0	2.7	2.9	2.8	3.6	4.2	4.6	4.4
1968	3.9	4.0	3.8	3.2	2.5	1.6	2.1	2.7	3.3	3.6	3.6	4.3	5.0	5.4	5.3
1969	3.1	3.1	2.9	2.3	1.6	0.8	1.1	1.7	2.1	2.3	2.3	2.9	3.5	3.8	3.7
1970	2.4	2.3	2.1	1.5	0.8	-0.1	0.2	0.6	1.0	1.1	1.1	1.7	2.2	2.4	2.4

*Beta and equity risk premium estimated using the Standard and Poor's 500 index.

Low-Cap Size Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-5

End Date	Start Date 1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
1971	2.4	2.3	2.1	1.5	0.8	0.0	0.3	0.7	1.1	1.2	1.2	1.7	2.2	2.4	2.4
1972	1.8	1.7	1.5	0.9	0.2	-0.5	-0.3	0.1	0.4	0.5	0.4	0.9	1.4	1.4	1.4
1973	0.9	0.8	0.6	-0.1	-0.7	-1.5	-1.4	-1.0	-0.8	-0.8	-0.8	-0.3	0.1	0.1	0.1
1974	1.5	1.4	1.2	0.5	-0.1	-0.9	-0.7	-0.4	-0.1	-0.1	-0.1	0.3	0.7	0.8	0.8
1975	1.8	1.8	1.6	1.0	0.4	-0.3	-0.2	0.2	0.5	0.5	0.5	1.0	1.4	1.5	1.6
1976	2.4	2.3	2.2	1.6	1.1	0.4	0.6	0.9	1.2	1.3	1.3	1.8	2.3	2.4	2.5
1977	3.1	3.1	3.0	2.4	1.9	1.3	1.5	1.8	2.2	2.3	2.3	2.8	3.3	3.5	3.6
1978	3.2	3.2	3.1	2.6	2.1	1.5	1.7	2.0	2.4	2.5	2.5	3.0	3.5	3.7	3.9
1979	3.8	3.7	3.7	3.1	2.7	2.1	2.3	2.7	3.0	3.2	3.3	3.8	4.3	4.4	4.7
1980	3.5	3.5	3.4	2.9	2.5	2.0	2.1	2.5	2.8	2.9	3.0	3.5	4.0	4.1	4.3
1981	3.7	3.7	3.7	3.2	2.7	2.2	2.4	2.7	3.1	3.2	3.3	3.8	4.2	4.4	4.6
1982	3.8	3.8	3.8	3.3	2.8	2.3	2.5	2.9	3.2	3.3	3.4	3.9	4.3	4.5	4.7
1983	3.9	3.8	3.8	3.3	2.9	2.4	2.6	2.9	3.2	3.4	3.4	3.9	4.3	4.5	4.7
1984	3.6	3.6	3.5	3.0	2.6	2.1	2.3	2.6	2.9	3.0	3.1	3.5	3.9	4.1	4.3
1985	3.4	3.4	3.4	2.9	2.5	2.0	2.2	2.5	2.8	2.9	2.9	3.4	3.7	3.9	4.0
1986	3.2	3.2	3.1	2.7	2.3	1.8	1.9	2.2	2.5	2.6	2.6	3.0	3.4	3.5	3.6
1987	2.9	2.9	2.8	2.3	1.9	1.5	1.6	1.9	2.1	2.2	2.3	2.6	3.0	3.1	3.2
1988	3.0	3.0	2.9	2.5	2.1	1.6	1.7	2.0	2.3	2.4	2.4	2.8	3.1	3.2	3.3
1989	2.7	2.7	2.6	2.1	1.8	1.3	1.4	1.7	1.9	2.0	2.0	2.3	2.7	2.7	2.8
1990	2.3	2.3	2.2	1.8	1.4	0.9	1.0	1.3	1.5	1.6	1.6	1.9	2.2	2.3	2.4
1991	2.6	2.6	2.5	2.1	1.7	1.3	1.4	1.6	1.9	1.9	1.9	2.3	2.5	2.6	2.7
1992	2.8	2.7	2.7	2.2	1.9	1.5	1.6	1.8	2.0	2.1	2.1	2.5	2.7	2.8	2.9
1993	2.8	2.8	2.8	2.4	2.0	1.6	1.7	1.9	2.2	2.2	2.3	2.6	2.9	3.0	3.0
1994	2.8	2.8	2.7	2.3	1.9	1.5	1.6	1.9	2.1	2.2	2.2	2.5	2.8	2.8	2.9
1995	2.5	2.5	2.4	2.0	1.7	1.3	1.4	1.6	1.8	1.9	1.9	2.2	2.4	2.5	2.6
1996	2.4	2.3	2.3	1.9	1.5	1.1	1.2	1.5	1.7	1.7	1.7	2.0	2.2	2.3	2.3
1997	2.2	2.2	2.1	1.8	1.4	1.0	1.1	1.3	1.5	1.6	1.6	1.9	2.1	2.1	2.2
1998	1.7	1.6	1.5	1.1	0.8	0.4	0.5	0.7	0.9	0.9	0.9	1.1	1.3	1.4	1.4
1999	1.8	1.8	1.7	1.3	1.0	0.6	0.7	0.9	1.1	1.1	1.1	1.3	1.5	1.6	1.6
2000	1.9	1.9	1.8	1.4	1.1	0.7	0.8	1.0	1.2	1.2	1.2	1.4	1.6	1.7	1.7
2001	2.3	2.2	2.2	1.8	1.5	1.1	1.2	1.4	1.6	1.6	1.6	1.9	2.1	2.2	2.2
2002	2.3	2.3	2.2	1.9	1.6	1.2	1.3	1.5	1.7	1.7	1.7	1.9	2.2	2.2	2.2
2003	2.6	2.6	2.5	2.2	1.8	1.5	1.6	1.8	2.0	2.0	2.0	2.3	2.5	2.6	2.6
2004	2.7	2.7	2.6	2.3	2.0	1.6	1.7	1.9	2.1	2.1	2.2	2.4	2.6	2.7	2.7
2005	2.6	2.6	2.6	2.2	1.9	1.6	1.7	1.9	2.1	2.1	2.1	2.4	2.6	2.6	2.7
2006	2.6	2.6	2.5	2.2	1.9	1.5	1.6	1.8	2.0	2.1	2.1	2.3	2.5	2.6	2.6
2007	2.5	2.4	2.4	2.0	1.8	1.4	1.5	1.7	1.9	1.9	1.9	2.1	2.3	2.4	2.4
2008	2.5	2.4	2.4	2.0	1.8	1.4	1.5	1.7	1.9	1.9	1.9	2.1	2.3	2.4	2.4

*Beta and equity risk premium estimated using the Standard and Poor's 500 index.

Low-Cap Size Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-5

End	Start Date														
Date	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
1926															
1927															
1928															
1929															
1930															
1931															
1932															
1933															
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1952															
1953															
1954															
1955															
1956															
1957															
1958															
1959															
1960	3.5														
1961	3.3	2.8													
1962	1.0	0.7	1.5												
1963	0.4	-0.2	0.4	-2.2											
1964	0.3	-0.3	0.1	-2.0	-3.5										
1965	2.3	2.0	2.6	1.1	0.4	0.6									
1966	2.4	2.2	2.8	1.6	1.1	1.5	2.2								
1967	5.1	5.2	5.9	5.3	5.3	6.1	7.7	10.0							
1968	6.1	6.2	7.0	6.6	6.8	7.7	9.3	11.4	15.0						
1969	4.6	4.6	5.1	4.8	4.8	5.4	6.7	7.9	10.9	14.1					
1970	3.2	3.2	3.5	3.2	3.1	3.5	4.5	5.4	7.6	9.7	7.8				

*Beta and equity risk premium estimated using the Standard and Poor's 500 index.

Low-Cap Size Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-5

End Date	Start Date 1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
1971	3.2	3.2	3.5	3.2	3.1	3.5	4.4	5.1	7.0	8.7	7.0	6.5			
1972	2.1	2.0	2.1	1.7	1.6	1.8	2.4	2.8	4.2	5.3	3.3	2.3	-3.6		
1973	0.9	0.8	0.8	0.5	0.3	0.4	1.0	1.2	2.5	3.5	1.6	0.3	-4.6	-9.1	
1974	1.5	1.5	1.8	1.3	1.2	1.5	1.8	2.4	3.4	4.1	2.2	1.7	-3.2	-7.3	-6.8
1975	2.3	2.3	2.6	2.2	2.1	2.4	2.8	3.4	4.5	5.2	3.7	3.3	-0.6	-3.5	-2.5
1976	3.2	3.3	3.6	3.3	3.3	3.6	4.1	4.7	5.8	6.6	5.4	5.2	1.9	-0.2	1.2
1977	4.4	4.5	4.9	4.7	4.7	5.1	5.7	6.3	7.4	8.3	7.3	7.3	4.6	2.9	4.5
1978	4.6	4.7	5.1	4.9	5.0	5.4	5.9	6.6	7.6	8.4	7.5	7.6	5.1	3.7	5.2
1979	5.4	5.6	6.0	5.8	6.0	6.4	7.0	7.6	8.7	9.5	8.8	8.9	6.8	5.6	7.2
1980	5.0	5.2	5.5	5.3	5.4	5.8	6.3	6.9	7.8	8.5	7.8	7.8	5.8	4.7	6.0
1981	5.3	5.5	5.8	5.7	5.8	6.1	6.6	7.2	8.1	8.8	8.1	8.1	6.3	5.3	6.5
1982	5.3	5.5	5.8	5.7	5.8	6.1	6.6	7.2	8.0	8.6	7.9	8.0	6.2	5.3	6.5
1983	5.3	5.4	5.7	5.6	5.7	6.0	6.5	7.0	7.8	8.3	7.7	7.7	6.0	5.2	6.3
1984	4.9	5.0	5.3	5.1	5.2	5.5	5.9	6.3	7.1	7.6	6.9	6.9	5.3	4.4	5.4
1985	4.6	4.7	5.0	4.8	4.8	5.1	5.5	5.9	6.5	7.0	6.3	6.3	4.8	3.9	4.8
1986	4.1	4.2	4.5	4.3	4.3	4.5	4.8	5.2	5.8	6.2	5.5	5.5	3.9	3.1	3.9
1987	3.7	3.8	4.0	3.8	3.8	4.0	4.2	4.6	5.1	5.5	4.8	4.7	3.2	2.3	3.1
1988	3.8	3.9	4.1	3.9	3.9	4.1	4.3	4.7	5.2	5.5	4.9	4.8	3.4	2.6	3.3
1989	3.3	3.3	3.5	3.3	3.2	3.4	3.6	4.0	4.4	4.7	4.0	3.9	2.5	1.7	2.4
1990	2.8	2.8	3.0	2.8	2.7	2.9	3.1	3.4	3.8	4.0	3.3	3.2	1.8	1.0	1.6
1991	3.1	3.2	3.3	3.1	3.1	3.2	3.4	3.7	4.1	4.4	3.7	3.7	2.3	1.6	2.2
1992	3.3	3.3	3.5	3.3	3.3	3.5	3.6	3.9	4.3	4.6	4.0	3.9	2.6	1.9	2.6
1993	3.4	3.5	3.7	3.4	3.4	3.6	3.8	4.1	4.4	4.7	4.1	4.0	2.8	2.2	2.8
1994	3.3	3.3	3.5	3.3	3.3	3.4	3.6	3.9	4.3	4.5	3.9	3.9	2.7	2.0	2.6
1995	2.9	2.9	3.1	2.9	2.8	3.0	3.1	3.4	3.7	3.9	3.3	3.3	2.1	1.5	2.0
1996	2.7	2.7	2.8	2.6	2.6	2.7	2.8	3.1	3.4	3.6	3.0	2.9	1.8	1.2	1.7
1997	2.5	2.5	2.6	2.4	2.3	2.4	2.6	2.8	3.1	3.2	2.7	2.6	1.5	0.9	1.4
1998	1.7	1.6	1.8	1.5	1.4	1.5	1.6	1.8	2.1	2.2	1.6	1.5	0.4	-0.2	0.3
1999	1.9	1.9	2.0	1.7	1.7	1.8	1.8	2.1	2.3	2.4	1.9	1.8	0.7	0.1	0.6
2000	1.9	1.9	2.1	1.8	1.7	1.8	1.9	2.1	2.4	2.5	1.9	1.9	0.8	0.2	0.7
2001	2.4	2.5	2.6	2.4	2.3	2.4	2.5	2.8	3.0	3.1	2.6	2.6	1.6	1.0	1.5
2002	2.5	2.5	2.7	2.5	2.4	2.5	2.6	2.8	3.1	3.2	2.7	2.7	1.7	1.2	1.6
2003	2.9	2.9	3.0	2.8	2.8	2.9	3.0	3.2	3.5	3.6	3.1	3.1	2.2	1.7	2.1
2004	3.0	3.0	3.2	2.9	2.9	3.0	3.1	3.4	3.6	3.7	3.3	3.2	2.4	1.9	2.3
2005	2.9	3.0	3.1	2.9	2.9	3.0	3.1	3.3	3.5	3.7	3.2	3.2	2.3	1.9	2.3
2006	2.9	2.9	3.0	2.8	2.8	2.9	3.0	3.2	3.4	3.5	3.1	3.1	2.2	1.8	2.2
2007	2.7	2.7	2.8	2.6	2.6	2.7	2.8	3.0	3.2	3.3	2.9	2.9	2.0	1.6	2.0
2008	2.7	2.7	2.9	2.7	2.6	2.7	2.8	3.0	3.2	3.4	3.0	2.9	2.1	1.7	2.0

*Beta and equity risk premium estimated using the Standard and Poor's 500 index.

Low-Cap Size Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-5

End Date	Start Date 1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
1971															
1972															
1973															
1974															
1975	-0.4														
1976	3.6	3.5													
1977	7.0	7.4	12.1												
1978	7.4	7.9	11.9	17.2											
1979	9.4	10.1	13.9	18.7	19.6										
1980	7.9	8.4	11.5	15.5	15.4	15.8									
1981	8.3	8.8	11.6	14.9	15.2	15.4	14.1								
1982	8.2	8.5	11.0	14.0	14.3	14.2	12.7	9.7							
1983	7.8	8.1	10.3	13.1	13.1	12.9	11.5	8.7	8.6						
1984	6.7	6.9	8.9	11.2	11.1	10.6	9.1	6.4	5.9	2.2					
1985	6.1	6.2	7.9	10.1	9.8	9.2	7.8	5.2	4.6	1.4	2.5				
1986	5.0	5.1	6.6	8.6	8.3	7.6	6.0	3.6	3.0	0.0	0.5	-1.2			
1987	4.1	4.1	5.4	7.1	6.9	6.0	4.5	2.2	1.4	-1.5	-1.4	-3.2	-5.3		
1988	4.3	4.3	5.5	7.1	6.9	6.2	4.7	2.7	2.0	-0.5	-0.2	-1.6	-3.1	-4.7	
1989	3.3	3.2	4.3	5.8	5.5	4.7	3.3	1.3	0.7	-1.7	-1.6	-2.9	-4.3	-6.0	-5.3
1990	2.4	2.3	3.3	4.6	4.3	3.5	2.0	0.1	-0.6	-2.9	-3.0	-4.4	-5.8	-7.4	-7.2
1991	3.0	3.0	3.9	5.3	4.9	4.2	2.9	1.2	0.6	-1.4	-1.2	-2.3	-3.3	-4.4	-3.8
1992	3.3	3.3	4.2	5.5	5.2	4.6	3.4	1.8	1.3	-0.5	-0.3	-1.1	-2.0	-2.8	-2.0
1993	3.5	3.5	4.4	5.6	5.4	4.7	3.6	2.2	1.8	0.1	0.4	-0.4	-1.1	-1.7	-0.9
1994	3.3	3.3	4.1	5.3	5.0	4.4	3.3	2.0	1.5	0.0	0.2	-0.5	-1.1	-1.7	-1.0
1995	2.7	2.6	3.4	4.5	4.2	3.6	2.6	1.2	0.8	-0.6	-0.5	-1.2	-1.8	-2.4	-1.8
1996	2.3	2.3	3.0	4.1	3.8	3.2	2.2	0.8	0.5	-0.9	-0.8	-1.4	-2.0	-2.6	-2.0
1997	2.0	2.0	2.7	3.7	3.4	2.8	1.9	0.6	0.3	-1.1	-0.9	-1.5	-2.1	-2.6	-2.0
1998	0.8	0.7	1.3	2.3	1.9	1.3	0.3	-1.0	-1.4	-2.7	-2.7	-3.4	-4.0	-4.6	-4.3
1999	1.2	1.1	1.7	2.7	2.3	1.7	0.8	-0.4	-0.8	-2.0	-1.9	-2.5	-3.1	-3.6	-3.2
2000	1.3	1.2	1.7	2.7	2.4	1.8	0.9	-0.2	-0.5	-1.7	-1.6	-2.2	-2.6	-3.2	-2.7
2001	2.0	2.0	2.6	3.5	3.2	2.7	1.9	0.8	0.5	-0.6	-0.5	-0.9	-1.3	-1.7	-1.3
2002	2.1	2.1	2.6	3.4	3.3	2.7	1.9	0.9	0.6	-0.4	-0.3	-0.8	-1.1	-1.5	-1.1
2003	2.7	2.6	3.2	4.0	3.8	3.4	2.6	1.7	1.4	0.5	0.6	0.2	-0.1	-0.4	0.1
2004	2.8	2.8	3.4	4.2	4.0	3.5	2.8	1.9	1.7	0.8	0.9	0.6	0.3	0.1	0.5
2005	2.8	2.8	3.3	4.1	3.9	3.5	2.8	1.9	1.7	0.8	0.9	0.6	0.3	0.1	0.5
2006	2.7	2.6	3.2	3.9	3.7	3.3	2.6	1.8	1.6	0.7	0.9	0.5	0.3	0.0	0.5
2007	2.4	2.4	2.9	3.6	3.4	3.0	2.4	1.5	1.3	0.5	0.6	0.3	0.0	-0.2	0.2
2008	2.5	2.4	2.9	3.6	3.4	3.0	2.3	1.6	1.3	0.5	0.6	0.3	0.0	-0.2	0.2

*Beta and equity risk premium estimated using the Standard and Poor's 500 index.

Low-Cap Size Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-5

End Date	Start Date 1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1971															
1972															
1973															
1974															
1975															
1976															
1977															
1978															
1979															
1980															
1981															
1982															
1983															
1984															
1985															
1986															
1987															
1988															
1989															
1990	-8.5														
1991	-4.3	-3.3													
1992	-2.2	-1.1	1.5												
1993	-0.9	0.2	2.6	1.4											
1994	-1.1	-0.1	1.9	0.8	3.5										
1995	-1.9	-1.2	0.6	-0.6	1.1	5.2									
1996	-2.1	-1.5	0.2	-1.0	0.2	3.9	1.5								
1997	-2.2	-1.6	0.2	-0.8	0.1	3.8	1.8	0.0							
1998	-4.5	-4.2	-3.1	-4.3	-3.7	-1.6	-4.2	-6.9	-10.1						
1999	-3.3	-3.0	-1.8	-2.8	-2.2	0.0	-2.1	-4.1	-6.2	-7.2					
2000	-2.9	-2.5	-1.3	-2.2	-1.5	0.5	-1.4	-3.0	-4.5	-4.8	-4.5				
2001	-1.3	-0.8	0.2	-0.4	0.4	2.1	0.6	-0.5	-1.6	-1.4	-0.4	0.3			
2002	-1.2	-0.7	0.3	-0.3	0.5	2.0	0.5	-0.5	-1.4	-1.2	-0.3	0.4	1.7		
2003	0.1	0.6	1.6	1.1	2.0	3.4	2.3	1.5	0.9	1.3	2.5	3.5	5.1	12.0	
2004	0.6	1.1	2.0	1.6	2.5	3.8	2.8	2.2	1.7	2.1	3.2	4.3	5.7	11.7	12.0
2005	0.6	1.1	1.9	1.5	2.4	3.6	2.6	2.1	1.6	1.9	3.0	3.9	5.2	10.3	10.4
2006	0.5	1.0	1.8	1.4	2.2	3.3	2.4	1.9	1.4	1.7	2.7	3.5	4.5	8.9	8.8
2007	0.2	0.6	1.4	1.0	1.7	2.8	1.9	1.3	0.9	1.1	2.0	2.6	3.5	7.3	7.0
2008	0.2	0.6	1.3	0.9	1.7	2.6	1.8	1.2	0.8	1.0	1.9	2.6	3.6	7.2	7.0

*Beta and equity risk premium estimated using the Standard and Poor's 500 index.

Low-Cap Size Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-5

End Date	Start Date 2001	2002	2003	2004
1971				
1972				
1973				
1974				
1975				
1976				
1977				
1978				
1979				
1980				
1981				
1982				
1983				
1984				
1985				
1986				
1987				
1988				
1989				
1990				
1991				
1992				
1993				
1994				
1995				
1996				
1997				
1998				
1999				
2000				
2001				
2002				
2003				
2004				
2005	12.9			
2006	10.4	6.6		
2007	8.0	4.6	2.1	
2008	8.2	5.1	4.9	2.7

*Beta and equity risk premium estimated using the Standard and Poor's 500 index.

Micro-Cap Size Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-6

End Date	Start Date 1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
1926															
1927															
1928															
1929															
1930	-19.1														
1931	-16.0	-15.1													
1932	-10.6	-8.7	-5.6												
1933	4.7	8.5	14.5	20.8											
1934	7.2	10.9	16.6	22.4	34.6										
1935	6.0	9.2	13.9	18.3	27.3	33.7									
1936	8.9	12.0	16.5	20.6	28.4	34.0	35.9								
1937	8.1	10.9	14.9	18.5	25.3	29.5	30.5	29.6							
1938	6.0	8.4	11.8	14.7	20.1	23.3	23.2	21.5	6.3						
1939	5.4	7.6	10.8	13.5	18.2	20.6	19.9	17.6	4.3	0.0					
1940	5.4	7.4	10.3	12.7	17.0	19.1	18.5	16.7	5.2	1.7	4.7				
1941	5.4	7.3	9.9	12.2	16.1	17.9	17.3	15.7	5.6	2.5	5.1	-0.4			
1942	6.4	8.2	10.8	12.9	16.5	18.2	17.7	16.2	7.2	4.9	7.3	2.9	2.3		
1943	9.4	11.3	13.9	16.1	19.6	21.4	21.0	19.7	12.0	10.5	13.5	10.9	11.4	18.2	
1944	10.5	12.4	14.9	17.0	20.3	22.0	21.6	20.4	13.4	12.3	15.1	13.1	13.8	19.4	24.8
1945	11.4	13.2	15.6	17.5	20.6	22.2	21.9	20.6	14.1	13.4	15.9	14.2	15.1	19.5	25.5
1946	10.9	12.6	14.8	16.6	19.5	21.0	20.6	19.4	13.4	12.5	14.8	13.1	13.8	17.7	21.9
1947	9.9	11.5	13.5	15.2	17.8	19.1	18.6	17.3	11.6	10.7	12.6	10.9	11.3	14.5	17.8
1948	9.0	10.4	12.3	13.8	16.2	17.3	16.8	15.6	10.2	9.2	10.8	9.0	9.3	12.1	14.8
1949	8.3	9.7	11.4	12.8	15.0	16.1	15.4	14.2	9.0	8.1	9.5	7.7	7.9	10.2	12.8
1950	7.9	9.2	10.9	12.1	14.2	15.1	14.4	13.1	8.2	7.4	8.6	6.9	7.1	9.0	11.8
1951	6.7	7.8	9.4	10.5	12.3	13.2	12.4	11.0	6.3	5.5	6.5	4.7	4.8	6.4	9.1
1952	5.7	6.8	8.2	9.3	10.9	11.7	10.9	9.5	5.0	4.2	5.0	3.3	3.3	4.7	7.3
1953	5.4	6.5	7.8	8.8	10.4	11.1	10.3	9.0	4.7	4.0	4.7	3.0	3.1	4.4	6.7
1954	4.9	5.8	7.1	8.0	9.4	10.0	9.2	8.0	3.9	3.2	3.8	2.2	2.3	3.5	6.3
1955	4.0	4.9	6.1	6.8	8.2	8.7	7.9	6.7	2.8	2.3	2.7	1.1	1.3	2.5	5.4
1956	3.8	4.7	5.8	6.5	7.8	8.3	7.6	6.5	2.8	2.3	2.7	1.1	1.4	2.6	5.4
1957	3.9	4.7	5.7	6.4	7.7	8.2	7.5	6.5	3.0	2.5	2.9	1.4	1.7	2.9	5.3
1958	4.0	4.8	5.8	6.5	7.6	8.2	7.5	6.5	3.2	2.8	3.1	1.7	2.0	3.2	5.9
1959	4.0	4.8	5.7	6.4	7.5	8.0	7.3	6.4	3.2	2.8	3.2	1.8	2.2	3.3	6.0
1960	3.8	4.6	5.5	6.1	7.2	7.7	7.1	6.2	3.2	2.8	3.1	1.8	2.2	3.3	5.7
1961	3.5	4.2	5.2	5.7	6.7	7.2	6.6	5.7	2.8	2.5	2.8	1.5	1.8	3.0	5.4
1962	3.5	4.2	5.0	5.6	6.6	7.0	6.4	5.7	2.9	2.5	2.8	1.5	1.9	3.0	5.1
1963	2.9	3.5	4.4	4.9	5.8	6.2	5.6	4.9	2.2	1.9	2.1	0.8	1.2	2.3	4.4
1964	2.7	3.3	4.2	4.6	5.5	5.9	5.3	4.6	2.0	1.7	1.9	0.7	1.1	2.1	4.2
1965	3.2	3.8	4.6	5.1	6.0	6.4	5.8	5.1	2.6	2.4	2.6	1.4	1.8	2.8	4.9
1966	3.3	4.0	4.7	5.2	6.1	6.5	6.0	5.3	2.9	2.6	2.8	1.7	2.1	3.0	4.9
1967	4.9	5.6	6.4	6.9	7.7	8.2	7.7	7.1	4.8	4.6	4.9	3.9	4.4	5.4	7.3
1968	5.7	6.3	7.1	7.6	8.5	8.9	8.5	8.0	5.8	5.6	5.9	5.0	5.5	6.5	8.4
1969	5.1	5.7	6.5	7.0	7.8	8.2	7.8	7.2	5.1	4.9	5.1	4.2	4.6	5.5	7.1
1970	4.6	5.2	5.9	6.4	7.2	7.6	7.2	6.6	4.5	4.2	4.5	3.5	3.9	4.7	6.2

*Beta and equity risk premium estimated using the Standard and Poor's 500 index.

Micro-Cap Size Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-6

End Date	Start Date 1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
1971	4.5	5.1	5.8	6.2	7.0	7.4	6.9	6.4	4.3	4.1	4.3	3.4	3.7	4.5	5.9
1972	3.8	4.4	5.1	5.5	6.2	6.6	6.1	5.6	3.5	3.3	3.5	2.6	2.9	3.7	5.0
1973	3.4	3.9	4.5	4.9	5.7	6.0	5.5	5.0	2.9	2.6	2.8	1.9	2.2	2.8	4.0
1974	3.8	4.3	4.9	5.3	6.1	6.4	6.1	5.6	3.6	3.3	3.5	2.6	2.9	3.6	4.5
1975	4.1	4.6	5.2	5.6	6.4	6.7	6.3	5.9	3.9	3.7	3.9	3.0	3.3	4.0	5.0
1976	4.4	4.9	5.6	6.0	6.7	7.0	6.7	6.2	4.3	4.1	4.3	3.5	3.8	4.5	5.4
1977	5.1	5.6	6.2	6.6	7.3	7.7	7.3	7.0	5.1	4.9	5.1	4.3	4.6	5.3	6.2
1978	5.3	5.8	6.4	6.8	7.5	7.8	7.5	7.2	5.4	5.1	5.3	4.6	4.9	5.5	6.4
1979	5.5	6.1	6.7	7.0	7.8	8.1	7.8	7.4	5.7	5.5	5.7	4.9	5.2	5.9	6.8
1980	5.3	5.8	6.4	6.8	7.4	7.8	7.5	7.1	5.4	5.2	5.4	4.7	5.0	5.6	6.5
1981	5.6	6.1	6.7	7.0	7.7	8.1	7.8	7.5	5.8	5.6	5.7	5.0	5.4	6.0	6.8
1982	5.6	6.1	6.6	7.0	7.7	8.0	7.7	7.4	5.8	5.6	5.8	5.1	5.4	6.0	6.8
1983	5.6	6.1	6.6	7.0	7.6	8.0	7.7	7.4	5.8	5.7	5.8	5.1	5.4	6.1	6.9
1984	5.2	5.7	6.2	6.6	7.2	7.5	7.3	7.0	5.4	5.2	5.3	4.7	5.0	5.5	6.3
1985	4.9	5.4	5.9	6.2	6.8	7.1	6.9	6.6	5.1	4.9	5.0	4.4	4.6	5.2	6.0
1986	4.6	5.0	5.5	5.8	6.4	6.7	6.5	6.2	4.7	4.5	4.7	4.0	4.3	4.9	5.6
1987	4.3	4.7	5.2	5.5	6.1	6.4	6.2	5.9	4.4	4.3	4.3	3.7	4.0	4.5	5.2
1988	4.3	4.7	5.2	5.5	6.0	7.1	6.1	5.9	4.4	4.2	4.3	3.7	4.0	4.5	5.2
1989	3.8	4.1	4.6	4.9	5.4	5.7	5.5	5.3	3.9	3.7	3.7	3.1	3.4	3.9	4.6
1990	3.4	3.8	4.3	4.5	5.0	5.3	5.1	4.9	3.5	3.3	3.3	2.7	3.0	3.5	4.1
1991	3.6	3.9	4.4	4.6	5.2	5.4	5.2	5.1	3.7	3.5	3.6	2.9	3.2	3.7	4.4
1992	3.8	4.2	4.6	4.9	5.4	5.7	5.5	5.3	4.0	3.8	3.9	3.3	3.6	4.1	4.7
1993	3.9	4.3	4.7	4.9	5.5	5.7	5.6	5.4	4.1	3.9	4.0	3.4	3.7	4.2	4.8
1994	3.8	4.2	4.6	4.8	5.4	5.6	5.5	5.3	4.0	3.8	3.9	3.3	3.6	4.1	4.7
1995	3.6	3.9	4.3	4.5	5.0	5.3	5.1	5.0	3.7	3.6	3.6	3.0	3.3	3.8	4.4
1996	3.4	3.7	4.1	4.3	4.8	5.1	4.9	4.8	3.5	3.4	3.4	2.8	3.1	3.6	4.3
1997	3.1	3.5	3.8	4.0	4.5	4.8	4.6	4.5	3.3	3.2	3.2	2.6	2.9	3.4	4.0
1998	2.5	2.8	3.2	3.4	3.8	4.1	3.9	3.8	2.6	2.5	2.5	1.9	2.2	2.7	3.3
1999	2.6	2.9	3.2	3.4	3.9	4.1	3.9	3.8	2.7	2.6	2.6	2.0	2.3	2.8	3.4
2000	2.6	2.9	3.3	3.5	3.9	4.2	4.0	3.9	2.8	2.7	2.7	2.1	2.4	2.9	3.5
2001	3.3	3.6	4.0	4.1	4.6	4.9	4.7	4.7	3.5	3.4	3.4	2.9	3.2	3.6	4.2
2002	3.5	3.8	4.2	4.4	4.9	5.1	5.0	4.9	3.8	3.7	3.7	3.1	3.4	3.8	4.4
2003	4.0	4.3	4.7	4.9	5.3	5.6	5.5	5.4	4.3	4.2	4.2	3.7	4.0	4.4	5.0
2004	4.0	4.3	4.7	4.8	5.3	5.5	5.4	5.4	4.3	4.2	4.2	3.7	4.0	4.4	5.0
2005	3.9	4.2	4.6	4.8	5.2	5.5	5.4	5.3	4.2	4.1	4.1	3.6	3.9	4.3	4.9
2006	3.8	4.2	4.5	4.7	5.1	5.4	5.2	5.2	4.1	4.0	4.1	3.5	3.8	4.3	4.8
2007	3.6	3.9	4.3	4.4	4.9	5.1	5.0	5.0	3.9	3.8	3.8	3.3	3.6	4.0	4.5
2008	3.7	4.0	4.4	4.5	5.0	5.2	5.1	5.1	4.0	3.8	3.9	3.3	3.6	4.0	4.5

*Beta and equity risk premium estimated using the Standard and Poor's 500 index.

Micro-Cap Size Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-6

End Date	Start Date 1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
1926															
1927															
1928															
1929															
1930															
1931															
1932															
1933															
1934															
1935															
1936															
1937															
1938															
1939															
1940															
1941															
1942															
1943															
1944															
1945	27.4														
1946	23.5	27.5													
1947	18.5	20.8	18.5												
1948	15.5	17.4	15.3	8.3											
1949	13.1	14.4	12.1	6.1	1.2										
1950	11.9	13.1	10.6	5.7	1.6	-4.6									
1951	9.0	9.8	7.2	2.7	-1.2	-7.0	-7.2								
1952	7.2	7.9	5.3	1.2	-2.5	-7.7	-7.6	-6.3							
1953	6.7	7.3	5.0	1.1	-2.3	-6.9	-6.6	-5.5	-4.0						
1954	6.3	7.1	4.8	1.5	-1.4	-5.5	-4.6	-3.1	-1.0	-0.1					
1955	5.6	6.4	4.2	1.3	-1.5	-5.3	-3.9	-2.4	0.2	1.2	-0.7				
1956	5.7	6.6	4.6	1.8	-0.7	-4.2	-2.8	-1.4	1.2	2.0	0.1	2.9			
1957	5.7	6.5	4.7	1.8	-0.6	-3.9	-2.7	-1.5	0.5	0.8	-1.2	0.6	2.1		
1958	6.3	7.2	5.4	3.1	1.0	-1.8	-0.4	0.9	3.1	3.9	2.8	5.1	7.1	10.0	
1959	6.4	7.2	5.6	3.4	1.5	-1.1	0.3	1.6	3.7	4.4	3.5	5.6	7.4	9.9	7.5
1960	6.2	7.0	5.5	3.3	1.4	-1.0	0.2	1.4	3.2	3.7	2.7	4.4	5.8	7.7	5.2
1961	5.8	6.5	5.1	3.1	1.4	-0.9	0.3	1.4	3.1	3.6	2.8	4.4	5.7	7.2	5.3
1962	5.4	6.1	4.7	2.6	0.8	-1.4	-0.5	0.4	1.7	1.9	1.0	2.2	3.2	4.2	2.4
1963	4.7	5.3	4.0	1.9	0.3	-1.8	-0.9	-0.1	1.0	1.2	0.3	1.4	2.3	3.0	1.3
1964	4.5	5.1	3.8	1.9	0.3	-1.7	-0.8	0.0	1.1	1.3	0.5	1.6	2.3	3.0	1.5
1965	5.2	5.8	4.6	2.9	1.4	-0.4	0.5	1.3	2.5	2.7	2.1	3.2	4.0	4.8	3.6
1966	5.2	5.8	4.6	2.9	1.5	-0.3	0.5	1.2	2.2	2.4	1.8	2.8	3.5	4.2	3.1
1967	7.7	8.3	7.3	5.7	4.5	3.0	3.9	4.8	5.9	6.3	6.0	7.2	8.2	9.1	8.6
1968	8.8	9.4	8.5	7.1	6.0	4.5	5.5	6.4	7.5	8.0	7.7	8.9	10.0	11.0	10.6
1969	7.4	7.9	7.0	5.5	4.3	3.0	3.6	4.4	5.2	5.6	5.3	6.4	7.3	8.0	7.7
1970	6.4	6.8	5.9	4.3	3.2	1.9	2.4	3.0	3.7	4.0	3.7	4.6	5.4	6.0	5.7

*Beta and equity risk premium estimated using the Standard and Poor's 500 index.

Micro-Cap Size Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-6

End	Start Date														
Date	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
1971	6.1	6.5	5.6	4.1	3.0	1.7	2.1	2.7	3.4	3.6	3.3	4.2	5.0	5.5	5.3
1972	5.2	5.5	4.6	3.1	2.1	0.8	1.2	1.7	2.3	2.5	2.2	3.0	3.7	4.0	3.7
1973	4.1	4.3	3.4	1.9	0.8	-0.5	-0.2	0.3	0.7	0.8	0.5	1.3	1.9	2.1	1.9
1974	4.7	4.9	4.1	2.5	1.4	0.2	0.4	0.9	1.4	1.5	1.1	1.8	2.4	2.7	2.4
1975	5.1	5.4	4.6	3.1	2.1	0.9	1.2	1.6	2.1	2.3	2.0	2.7	3.4	3.7	3.5
1976	5.6	5.8	5.1	3.6	2.7	1.6	1.9	2.3	2.8	3.0	2.8	3.5	4.2	4.5	4.5
1977	6.4	6.7	6.0	4.6	3.7	2.6	2.9	3.4	3.9	4.1	3.9	4.7	5.4	5.7	5.7
1978	6.6	6.9	6.2	4.8	4.0	2.9	3.2	3.7	4.2	4.4	4.2	5.0	5.7	6.0	6.1
1979	6.9	7.2	6.6	5.2	4.4	3.5	3.8	4.2	4.7	4.9	4.8	5.6	6.3	6.6	6.7
1980	6.6	6.9	6.3	5.0	4.2	3.2	3.5	4.0	4.4	4.6	4.5	5.3	5.9	6.2	6.3
1981	7.0	7.2	6.6	5.3	4.6	3.6	3.9	4.4	4.8	5.0	4.9	5.6	6.3	6.6	6.7
1982	7.0	7.2	6.6	5.4	4.6	3.7	4.0	4.4	4.9	5.1	5.0	5.7	6.3	6.6	6.7
1983	7.0	7.3	6.7	5.5	4.8	3.9	4.2	4.6	5.1	5.2	5.1	5.8	6.4	6.7	6.8
1984	6.4	6.7	6.1	4.9	4.1	3.3	3.5	3.9	4.4	4.5	4.4	5.0	5.6	5.9	5.9
1985	6.1	6.3	5.8	4.6	3.9	3.0	3.3	3.6	4.1	4.2	4.1	4.7	5.2	5.5	5.5
1986	5.7	5.9	5.4	4.2	3.5	2.7	2.9	3.2	3.6	3.8	3.6	4.2	4.7	4.9	4.9
1987	5.3	5.5	4.9	3.8	3.0	2.2	2.4	2.7	3.1	3.2	3.1	3.6	4.1	4.3	4.2
1988	5.3	5.5	5.0	3.8	3.1	2.3	2.5	2.8	3.2	3.3	3.1	3.6	4.1	4.3	4.2
1989	4.7	4.9	4.3	3.2	2.5	1.7	1.9	2.2	2.5	2.6	2.4	2.9	3.3	3.5	3.4
1990	4.2	4.4	3.8	2.7	2.0	1.2	1.3	1.6	2.0	2.0	1.8	2.3	2.7	2.8	2.7
1991	4.5	4.7	4.1	3.0	2.3	1.5	1.7	2.0	2.3	2.4	2.2	2.7	3.1	3.2	3.1
1992	4.8	5.0	4.5	3.4	2.7	2.0	2.2	2.5	2.8	2.9	2.7	3.2	3.5	3.7	3.6
1993	4.9	5.1	4.6	3.5	2.9	2.1	2.3	2.6	3.0	3.0	2.9	3.3	3.7	3.9	3.8
1994	4.8	5.0	4.5	3.4	2.8	2.0	2.2	2.5	2.8	2.9	2.7	3.2	3.5	3.7	3.6
1995	4.5	4.7	4.2	3.2	2.6	1.8	2.0	2.3	2.6	2.7	2.5	2.9	3.3	3.4	3.3
1996	4.4	4.5	4.0	3.1	2.4	1.7	1.9	2.2	2.5	2.6	2.4	2.8	3.1	3.3	3.1
1997	4.2	4.3	3.8	2.9	2.3	1.6	1.8	2.0	2.3	2.4	2.2	2.6	2.9	3.0	2.9
1998	3.4	3.6	3.1	2.1	1.5	0.8	1.0	1.2	1.5	1.5	1.3	1.7	2.0	2.1	1.9
1999	3.6	3.7	3.2	2.3	1.7	1.0	1.2	1.4	1.7	1.7	1.5	1.9	2.2	2.3	2.1
2000	3.6	3.8	3.3	2.4	1.8	1.1	1.3	1.5	1.8	1.8	1.6	1.9	2.2	2.3	2.2
2001	4.3	4.5	4.0	3.1	2.5	1.9	2.1	2.3	2.6	2.6	2.5	2.8	3.1	3.2	3.1
2002	4.5	4.7	4.2	3.3	2.7	2.1	2.2	2.5	2.7	2.8	2.6	3.0	3.3	3.4	3.3
2003	5.1	5.3	4.9	4.0	3.4	2.8	3.0	3.2	3.5	3.6	3.4	3.8	4.1	4.3	4.1
2004	5.1	5.3	4.8	4.0	3.4	2.8	3.0	3.2	3.5	3.6	3.5	3.8	4.1	4.3	4.1
2005	5.0	5.1	4.7	3.9	3.3	2.7	2.9	3.1	3.4	3.5	3.3	3.7	4.0	4.1	4.0
2006	4.9	5.1	4.7	3.8	3.3	2.7	2.9	3.1	3.4	3.4	3.3	3.6	3.9	4.1	4.0
2007	4.6	4.8	4.4	3.5	3.0	2.4	2.6	2.8	3.1	3.1	3.0	3.3	3.6	3.7	3.6
2008	4.6	4.7	4.3	3.4	2.9	2.3	2.5	2.7	3.0	3.0	2.9	3.2	3.5	3.6	3.5

*Beta and equity risk premium estimated using the Standard and Poor's 500 index.

Micro-Cap Size Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-6

End Date	Start Date 1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
1926															
1927															
1928															
1929															
1930															
1931															
1932															
1933															
1934															
1935															
1936															
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1948															
1949															
1950															
1951															
1952															
1953															
1954															
1955															
1956															
1957															
1958															
1959															
1960	5.8														
1961	5.7	6.3													
1962	3.0	3.4	4.5												
1963	1.6	1.6	2.2	-2.3											
1964	1.7	1.6	2.1	-1.6	-3.5										
1965	4.0	4.1	4.7	2.1	1.1	1.5									
1966	3.6	3.8	4.4	1.9	1.2	1.8	1.9								
1967	9.5	10.1	11.1	9.9	10.3	11.9	14.0	17.2							
1968	11.7	12.4	13.6	12.7	13.4	15.2	17.4	20.8	27.3						
1969	8.7	9.2	9.8	9.1	9.4	10.6	12.3	14.0	19.1	23.9					
1970	6.6	7.0	7.4	6.6	6.7	7.5	8.7	10.0	13.9	16.8	15.8				

*Beta and equity risk premium estimated using the Standard and Poor's 500 index.

Micro-Cap Size Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-6

End Date	Start Date 1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
1971	6.1	6.5	6.8	6.0	6.1	6.8	7.8	8.8	12.0	14.3	13.1	13.8			
1972	4.4	4.6	4.7	3.9	3.8	4.2	4.9	5.4	7.8	9.2	7.5	7.1	-5.3		
1973	2.6	2.8	2.7	2.0	1.9	2.1	2.8	3.0	5.3	6.4	4.6	3.8	-7.0	-15.5	
1974	3.2	3.4	3.7	2.7	2.6	3.1	3.4	4.1	6.0	6.8	5.0	4.9	-5.3	-12.7	-11.6
1975	4.3	4.6	4.8	4.1	4.0	4.5	5.1	5.7	7.6	8.5	7.1	7.1	-1.1	-6.6	-4.6
1976	5.2	5.5	5.7	5.2	5.2	5.7	6.3	6.9	8.7	9.7	8.6	8.7	1.7	-2.7	-0.5
1977	6.5	6.9	7.2	6.7	6.8	7.4	8.0	8.8	10.6	11.6	10.7	11.0	4.9	1.3	3.8
1978	6.9	7.3	7.6	7.1	7.3	7.8	8.5	9.2	11.0	12.0	11.2	11.5	5.9	2.8	5.2
1979	7.5	7.9	8.2	7.8	8.0	8.6	9.2	9.9	11.6	12.6	11.9	12.2	7.3	4.6	6.9
1980	7.0	7.4	7.6	7.2	7.4	7.8	8.5	9.0	10.6	11.4	10.7	10.9	6.2	3.6	5.7
1981	7.4	7.8	8.1	7.7	7.9	8.4	9.0	9.6	11.1	11.9	11.2	11.5	7.1	4.8	6.8
1982	7.4	7.7	8.0	7.6	7.7	8.2	8.8	9.3	10.7	11.4	10.7	11.0	6.9	4.7	6.6
1983	7.4	7.8	8.0	7.7	7.8	8.2	8.7	9.3	10.5	11.2	10.6	10.8	6.9	4.9	6.7
1984	6.5	6.8	7.0	6.7	6.7	7.1	7.5	8.0	9.2	9.7	9.0	9.2	5.4	3.4	5.0
1985	6.1	6.3	6.5	6.1	6.1	6.5	6.9	7.3	8.3	8.8	8.1	8.2	4.6	2.7	4.1
1986	5.4	5.6	5.8	5.3	5.3	5.7	6.0	6.3	7.3	7.7	6.9	7.0	3.5	1.6	3.0
1987	4.7	4.9	5.1	4.6	4.6	4.8	5.1	5.4	6.3	6.6	5.9	5.9	2.5	0.6	1.8
1988	4.7	4.9	5.0	4.6	4.5	4.8	5.0	5.4	6.2	6.5	5.8	5.8	2.5	0.8	2.0
1989	3.8	4.0	4.1	3.6	3.5	3.8	3.9	4.2	4.9	5.1	4.4	4.4	1.2	-0.6	0.6
1990	3.1	3.2	3.3	2.8	2.7	2.9	3.0	3.3	4.0	4.1	3.4	3.3	0.2	-1.5	-0.5
1991	3.5	3.6	3.7	3.2	3.2	3.4	3.5	3.8	4.4	4.6	3.8	3.8	0.9	-0.7	0.3
1992	4.0	4.1	4.2	3.8	3.7	3.9	4.1	4.4	5.0	5.2	4.5	4.5	1.7	0.2	1.2
1993	4.1	4.3	4.4	3.9	3.9	4.1	4.2	4.5	5.1	5.3	4.7	4.7	2.0	0.5	1.5
1994	3.9	4.1	4.2	3.8	3.7	3.9	4.0	4.3	4.9	5.0	4.4	4.4	1.8	0.4	1.4
1995	3.7	3.8	3.9	3.4	3.3	3.5	3.6	3.9	4.4	4.6	3.9	3.9	1.4	0.0	1.0
1996	3.4	3.5	3.6	3.2	3.1	3.3	3.4	3.6	4.1	4.3	3.6	3.6	1.2	-0.2	0.8
1997	3.2	3.2	3.3	2.9	2.8	2.9	3.0	3.3	3.7	3.8	3.2	3.2	0.8	-0.5	0.4
1998	2.2	2.2	2.3	1.8	1.7	1.8	1.9	2.1	2.5	2.5	1.9	1.8	-0.5	-1.8	-1.0
1999	2.4	2.4	2.5	2.0	1.9	2.0	2.1	2.3	2.7	2.8	2.1	2.1	-0.2	-1.4	-0.6
2000	2.4	2.5	2.5	2.1	2.0	2.1	2.1	2.3	2.7	2.8	2.2	2.1	-0.1	-1.3	-0.5
2001	3.3	3.4	3.5	3.1	3.0	3.2	3.2	3.5	3.9	4.0	3.4	3.4	1.3	0.2	1.0
2002	3.5	3.6	3.7	3.3	3.2	3.4	3.5	3.7	4.1	4.2	3.7	3.7	1.6	0.5	1.3
2003	4.4	4.5	4.6	4.2	4.2	4.4	4.5	4.7	5.1	5.3	4.8	4.8	2.8	1.8	2.6
2004	4.4	4.5	4.6	4.2	4.2	4.4	4.5	4.7	5.1	5.2	4.8	4.8	2.9	1.9	2.7
2005	4.3	4.4	4.5	4.1	4.1	4.2	4.3	4.5	4.9	5.1	4.6	4.6	2.8	1.8	2.5
2006	4.2	4.3	4.4	4.0	4.0	4.1	4.2	4.5	4.8	5.0	4.5	4.5	2.7	1.8	2.5
2007	3.9	3.9	4.1	3.7	3.6	3.8	3.8	4.1	4.4	4.5	4.1	4.1	2.3	1.4	2.1
2008	3.7	3.8	3.9	3.6	3.5	3.7	3.7	4.0	4.3	4.4	4.0	4.0	2.2	1.3	2.0

*Beta and equity risk premium estimated using the Standard and Poor's 500 index.

Micro-Cap Size Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-6

End Date	Start Date 1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
1971															
1972															
1973															
1974															
1975	-1.6														
1976	2.7	3.2													
1977	7.2	8.1	14.7												
1978	8.3	9.4	15.1	21.8											
1979	9.8	11.0	16.1	22.0	22.7										
1980	8.2	9.1	13.4	18.3	17.8	17.6									
1981	9.2	10.1	14.0	18.2	18.5	18.1	17.0								
1982	8.8	9.5	12.9	16.7	17.0	16.2	14.8	11.2							
1983	8.7	9.4	12.4	15.9	16.1	15.3	14.0	10.8	10.1						
1984	6.8	7.2	9.8	12.7	12.7	11.5	9.9	6.6	5.2	1.9					
1985	5.7	6.1	8.4	11.1	10.7	9.5	7.9	4.8	3.4	0.5	1.1				
1986	4.4	4.7	6.6	9.1	8.8	7.4	5.7	2.8	1.4	-1.4	-1.4	-4.3			
1987	3.2	3.3	5.0	7.2	6.9	5.4	3.6	0.7	-0.8	-3.7	-4.1	-7.1	-9.7		
1988	3.2	3.4	5.0	7.0	6.8	5.3	3.7	1.1	-0.2	-2.7	-2.9	-5.3	-7.1	-10.8	
1989	1.7	1.7	3.2	5.0	4.7	3.2	1.6	-0.9	-2.2	-4.6	-5.0	-7.3	-9.2	-12.7	-10.9
1990	0.5	0.5	1.7	3.4	3.0	1.5	-0.2	-2.6	-4.0	-6.4	-7.0	-9.3	-11.2	-14.4	-13.3
1991	1.3	1.3	2.6	4.2	3.9	2.6	1.1	-1.1	-2.2	-4.2	-4.5	-6.3	-7.7	-10.1	-8.4
1992	2.2	2.3	3.5	5.1	4.9	3.7	2.3	0.4	-0.5	-2.2	-2.4	-3.7	-4.7	-6.5	-4.6
1993	2.5	2.6	3.8	5.4	5.2	4.0	2.8	1.0	0.2	-1.4	-1.4	-2.6	-3.4	-4.9	-3.0
1994	2.3	2.4	3.5	4.9	4.8	3.6	2.4	0.7	0.0	-1.5	-1.6	-2.7	-3.4	-4.8	-3.1
1995	1.9	1.9	3.0	4.4	4.2	3.2	2.0	0.4	-0.3	-1.7	-1.7	-2.7	-3.4	-4.7	-3.1
1996	1.6	1.7	2.7	4.1	3.8	2.8	1.7	0.2	-0.5	-1.8	-1.7	-2.7	-3.3	-4.5	-3.0
1997	1.2	1.3	2.2	3.6	3.4	2.4	1.4	-0.1	-0.7	-1.9	-1.9	-2.8	-3.3	-4.4	-3.0
1998	-0.2	-0.2	0.6	1.9	1.6	0.6	-0.5	-2.0	-2.6	-3.9	-4.0	-4.9	-5.6	-6.8	-5.6
1999	0.2	0.2	1.0	2.3	2.0	1.1	0.1	-1.3	-1.9	-3.1	-3.1	-3.9	-4.5	-5.5	-4.3
2000	0.3	0.3	1.0	2.3	2.1	1.2	0.2	-1.1	-1.7	-2.8	-2.9	-3.6	-4.1	-5.1	-3.9
2001	1.7	1.8	2.6	3.8	3.7	2.8	1.9	0.7	0.2	-0.8	-0.8	-1.4	-1.8	-2.5	-1.3
2002	2.0	2.1	2.8	4.0	3.9	3.0	2.1	1.0	0.5	-0.4	-0.5	-1.0	-1.4	-2.1	-1.0
2003	3.4	3.5	4.2	5.4	5.4	4.6	3.8	2.8	2.4	1.6	1.7	1.2	1.0	0.4	1.6
2004	3.4	3.5	4.3	5.4	5.3	4.6	3.8	2.9	2.5	1.7	1.8	1.4	1.1	0.6	1.8
2005	3.2	3.3	4.1	5.1	5.1	4.4	3.6	2.7	2.3	1.5	1.6	1.2	1.0	0.5	1.6
2006	3.2	3.3	4.0	5.0	5.0	4.3	3.6	2.6	2.3	1.6	1.7	1.2	1.0	0.6	1.6
2007	2.7	2.8	3.5	4.5	4.4	3.7	3.0	2.1	1.7	1.0	1.1	0.6	0.4	0.0	0.9
2008	2.6	2.6	3.3	4.2	4.1	3.4	2.7	1.8	1.4	0.7	0.7	0.3	0.1	-0.4	0.5

*Beta and equity risk premium estimated using the Standard and Poor's 500 index.

Micro-Cap Size Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-6

End Date	Start Date 1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1971															
1972															
1973															
1974															
1975															
1976															
1977															
1978															
1979															
1980															
1981															
1982															
1983															
1984															
1985															
1986															
1987															
1988															
1989															
1990	-15.2														
1991	-9.2	-8.3													
1992	-4.8	-3.4	0.9												
1993	-2.9	-1.4	2.4	1.6											
1994	-3.1	-1.8	1.4	0.5	4.4										
1995	-3.0	-1.9	1.2	0.4	3.4	10.5									
1996	-2.9	-1.9	1.1	0.3	2.8	8.9	6.1								
1997	-2.9	-2.1	1.0	0.3	2.4	8.0	5.6	2.0							
1998	-5.7	-5.2	-3.1	-4.1	-2.6	1.0	-2.2	-6.6	-10.2						
1999	-4.3	-3.8	-1.6	-2.3	-0.9	2.7	0.1	-3.4	-5.8	-6.2					
2000	-4.0	-3.4	-1.3	-2.0	-0.7	2.5	0.2	-2.6	-4.5	-4.3	-5.6				
2001	-1.2	-0.5	1.4	1.0	2.6	5.4	3.7	1.7	0.6	1.4	1.6	2.1			
2002	-0.9	-0.1	1.4	1.1	2.6	5.1	3.5	1.8	0.9	1.6	1.9	2.5	4.6		
2003	1.9	2.8	4.4	4.3	6.0	8.5	7.4	6.1	5.7	6.9	7.9	9.4	12.2	22.0	
2004	2.0	2.9	4.4	4.3	5.9	8.3	7.2	6.0	5.6	6.7	7.6	8.9	11.3	19.3	21.5
2005	1.8	2.6	4.0	3.9	5.4	7.5	6.5	5.4	5.0	5.8	6.7	7.7	9.7	16.4	17.8
2006	1.8	2.6	3.9	3.8	5.2	7.2	6.2	5.1	4.7	5.5	6.2	7.1	8.8	14.6	15.4
2007	1.1	1.8	3.0	2.9	4.1	5.9	5.0	3.8	3.4	4.0	4.6	5.2	6.6	11.5	11.8
2008	0.7	1.3	2.4	2.2	3.5	5.0	4.1	3.1	2.6	3.1	3.7	4.4	5.8	10.4	10.8

*Beta and equity risk premium estimated using the Standard and Poor's 500 index.

Micro-Cap Size Premia* (in percent)

2009 Ibbotson SBBI Valuation Yearbook: Appendix A, Table A-6

End Date	Start Date 2001	2002	2003	2004
1971				
1972				
1973				
1974				
1975				
1976				
1977				
1978				
1979				
1980				
1981				
1982				
1983				
1984				
1985				
1986				
1987				
1988				
1989				
1990				
1991				
1992				
1993				
1994				
1995				
1996				
1997				
1998				
1999				
2000				
2001				
2002				
2003				
2004				
2005	22.3			
2006	18.5	12.2		
2007	13.9	7.9	4.2	
2008	13.0	7.6	6.3	-0.7

*Beta and equity risk premium estimated using the Standard and Poor's 500 index.

IN THE MATTER OF THE PETITION OF PIVOTAL UTILITY HOLDINGS, INC. D/B/A ELIZABETHTOWN GAS FOR APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE AND OTHER TARIFF REVISIONS
BPU DOCKET NO. GR09030195

RM

RCR-COC-21

Q. **Please explain why Dr. Morin employs Zacks as a source of company earnings growth rates instead of other sources such as First Call, Standard & Poors or Reuters? Does he object to the use of these other sources? If so, please explain why.**

A. Dr. Morin does not object to the use of other sources of growth forecasts. However, not only are the Zacks forecasts conveniently available in the Value Line Investment Analyzer software but, for all practical purposes, cover the same analyst population as Thomson, First Call, Yahoo, and others. It would be somewhat redundant to include growth forecasts from other published sources and possibly result in double-counting.

IN THE MATTER OF THE PETITION OF PIVOTAL UTILITY HOLDINGS, INC. D/B/A ELIZABETHTOWN GAS FOR APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE AND OTHER TARIFF REVISIONS
BPU DOCKET NO. GR09030195

RM

RCR-COC-22

Q. (Reference: Morin testimony, page 16). Please provide Dr. Morin's opinion concerning the relative cost of equity of ETG versus AGL and the reasons for any differences.

A. AGL can be seen as a portfolio of companies, including mostly regulated companies and some unregulated companies. Given that the regulated operations of the parent constitute the vast majority of the parent's activities and value, there is little distinction to be made between the subsidiary and the parent. Because the risk-return properties of AGL portfolio are dominated by the risk-return properties of the regulated operations component, it is appropriate to assume that the risk of AGL is comparable to that of its regulated subsidiaries and that investors perceive AGL as a utility company.

IN THE MATTER OF THE PETITION OF PIVOTAL UTILITY HOLDINGS, INC. D/B/A ELIZABETHTOWN GAS FOR APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE AND OTHER TARIFF REVISIONS
BPU DOCKET NO. GR09030195

RM

RCR-COC-25

Q. Please document and provide supporting evidence for the statement at page 75 of Dr. Morin's testimony which asserts that the majority of his comparable gas companies have revenue decoupling and/or pipe replacement rider mechanisms.

A. See attached document RCR-COC-25.1 for a survey of such mechanisms that are quite prevalent in the natural gas industry.

	State	Company	Docket number	Date of Decision	Basis for Rate Adjustments	Classes	Period	Additional Information; Additional Clauses
1	AR	Arkansas Oklahoma Gas Corp.	D-07-026-U	11/20/2007	Annual weather normalized actual class revenues compared to target (rate case) revenues[1]	Residential and Small Business	Annual true up; Nov 1 – Oct 31	WNA[2] CGA[3] Municipal Tax Clause
2	AR	Arkansas Western Gas	D-06-124-U	7/13/2007	Annual actual revenues compared to rate case revenues[4] No class true up if (1) customers and volumes or (2) revenues are ≥ TY ("Test Year") levels Separate WNA	Residential (RS-l), Business 1- Sales and Transport (B-l), and Business 2-Sales and Transport (B-2) rate classes.	Annual true up, August – July; adjustment rate in effect following January through December	WNA Tax and fee
3	AR	CenterPoint Arkansas	06- 16 1 -U	10/25/07	Annual actual revenues compared to rate case revenues[18] No class true up if (1) customers and volumes or (2) revenues are ≥ TY levels WNA currently in effect[1]	Residential Firm Sales Service, RS-1, Small Commercial Firm Sales Service, SC-1, Small Commercial Firm Sales Service - Off Peak, SCS-2	Annual true up, January – December adjustment rate in effect following July through June	WNA
4	CA	PG&E	AP-9712020 De-0002046	5/27/2004	Rate Plan Revenue Requirement	All	Annual	23 Balancing accounts, Adjustments Core, non-core fixed cost; pension contribution 7 memo accounts Catastrophic Event, Advanced Metering Infrastructure, Financial Hedging

1 This atypical decoupling feature was designed to address the atypical condition of declining customers, declining Mcf
2 WNA: Weather Normalization adjustment clause.; WN: weather normalized
3 CGA: Cost of Gas Adjustment clause.
4 This atypical decoupling feature was designed to address the atypical condition of declining customers, declining Mcf

	State	Company	Docket number	Date of Decision	Basis for Rate Adjustments	Classes	Period	Additional Information; Additional Clauses
5	CA	SOCal Gas		1998	PBR[5] price cap rate plan	All	Annual	18 Balancing Accounts Pension, PBOP[6], Core, non-core fixed cost 26 memo accounts Catastrophic Event, Intervenor Award ESM[7]
6	CA	Southwest Gas		3/16/2004	Rate plan revenue requirement Attrition year increases could be adjusted down if pipe replacement targets missed Actual margin revenues compared to authorized levels	All	Annual	Catastrophic Event, Public Purpose Program, Low Income Energy Efficiency
7	CO	Public Service Co. of CO	D-06S-656G	6/18/2007	NUPC true up mechanism Difference between WN actual use per customer and TY UPC, times margin rate times actual customers	Residential RG	Annual	
8	IL	Central Illinois Light Co.	D-07-0588	Pending filed 11/2/2007	Billing month adjustment: the difference between actual class revenues per actual customer vs. TY revenues per TY customer, multiplied by TY customers, plus prior year reconciliation	Residential (GDS-1), Small General (GDS-2)	Monthly with 2 month lag between calculation and billing of adjustment	Uncollectibles CGA Environmental Remediation costs Franchise cost adjustment Government Compliance cost adjustment

5 PBR: Performance Based Ratemaking
6 PBOP: Post-retirement other than Pension expense
7 ESM: Earnings Sharing Mechanism

	State	Company	Docket number	Date of Decision	Basis for Rate Adjustments	Classes	Period	Additional Information; Additional Clauses
9	IL	Central Illinois Public Service Co.	D-07-0589	Pending filed 11/2/2007	Billing month adjustment: the difference between actual class revenues per actual customer vs. TY revenues per TY customer, multiplied by TY customers, plus prior year reconciliation	Residential (GDS-1), Small General (GDS-2)	Monthly with 2 month lag between calculation and billing of adjustment	Uncollectibles CGA Environmental Remediation costs Franchise cost adjustment Government Compliance cost adjustment
10	IL	Illinois Power Co.	D-07-0590	Pending filed 11/2/2007	Billing month adjustment: the difference between actual class revenues per actual customer vs. TY revenues per TY customer, multiplied by TY customers, plus prior year reconciliation	Residential (GDS-1), Small General (GDS-2)	Monthly with 2 month lag between calculation and billing of adjustment	Uncollectibles CGA Environmental Remediation costs Franchise cost adjustment Government Compliance cost adjustment
11	IL	Peoples Gas Light and Coke Co. and North Shore Gas Co.	D-07-0241, 0242	Pending	Monthly difference between actual and TY ("Test Year") margin per customer, times TY customers, divided by estimated volumes, 2 months later. Actual and target revenues is deferred	Service classes 1N, 1H, and 2	Monthly	CGA Municipal taxes Environmental costs
12	IN	Southern Indiana Gas and Electric	C- 43046 C-43112	12/1/2006 8/1/2007	85% of difference between actual class margins and TY margins by class, adj for growth in customers	Residential, General Service sales; School transportation	Annual recovery of accumulated deferred balance; with reconciliation	Bad debt gas , pipeline safety, bare steel replacement (PSA), normal temperature adjustment
13	KS	Atmos Energy Corp	D-08-ATMG-280-RTS	Pending filed 9/14/2007	Difference between test-year average margin per customer and actual average margin per customer (including margins from the WN adjustment) times the monthly average number of billing units for the accounting/recovery period	All Residential, Commercial, Public Authority Bills	Annual	WNA separate

	State	Company	Docket number	Date of Decision	Basis for Rate Adjustments	Classes	Period	Additional Information; Additional Clauses
14	MD	Washington Gas Light Company	Case No. 8990	8/6/2005	Calculate billing month adjustment based on actual class revenues vs. TY revenues, adjusted for customer growth Reconciliation of actual and target revenues	Rate Schedule Nos. 1, 1A, 2, 2A, 3 and 3A	Monthly with 2 month lag	
15	NC	Piedmont Natural Gas	D-G-9,SUB499	11/3/2005	Rev Adj by class by month = Target revenues – Actual revenues.: Target: actual customers x (TY base load/cust + TY TS factor x Normal HDD) Interest on deferred	Rate schedules 101, 121, 102, 132, 152, 162	Adj Factor changes Apr, Nov, based on deferred bal at Jan, Aug	Pipeline integrity, PBOP regulatory assets Bad debt (gas)
16	NJ	South Jersey Gas /New Jersey Natural Gas		11/9/2006	Monthly difference between current actual and TY NUPC, times predetermined weighted margin per therm times actual monthly customers Capped to limit ROE to 10.5%	Resid, Resid Transport, Gen Svc High LF, Comprehensive Transportation and Balancing, Gen Svc Low LF, Small Commercial Rebundled Trans, ED	Annual	WNA
17	NY	Con Ed	06-G-1332	9/25/2007	Difference between rate case rate year revenue per customer and actual rate year revenue per customer, times actual rate year customers.	SC No. 2 - Rate I; SC No. 2 - Rate II; SC No. 3 customers with 1-4 dwelling units; and SC No. 3 customers with more than 4 dwelling units, SC No. 9; excluding customers taking service under special rates ED, Low Income, Manuf, Econ by pass	Annual	WNA ESM Trackers for: property taxes, non-Company labor interference expenses, Cap Ex, PBOP, Gas transmission main maintenance, R&D, environmental remediation, pipeline integrity programs, distribution integrity and/or gas inspections

	State	Company	Docket number	Date of Decision	Basis for Rate Adjustments	Classes	Period	Additional Information; Additional Clauses
18	NY	National Fuel	C-07-G-0141	12/21/2007	Difference between annual TY UPC and current year WN UPC, times block rate times customers	SC 1, SC 2, SC 2A (Res) and SC 3. (GS)	Annually; 12 months ended December data. Effective March 1	WNA
19	OH	Dominion East Ohio	C-07-829-GA-AIR	Pending filed 8/30/2007	Difference between order-granted revenues and actual WN revenues with order-granted revenues adjusted to reflect growth in number of customers	GSS, LVGSS, ECTS, LVECTS	New rate effective November 1 annually	Low income subsidy adjustment Uncollectible adjustment
20	OH	Duke Energy Ohio, Inc.	C-07-589-GA-AIR	Pending filed 7/17/2007	Difference between order-granted revenues and actual WN revenues with order-granted revenues adjusted to reflect growth in number of customers	All sales & transportation customers except Rate IT	Annual	Main replacement rider Low income subsidy adjustment Uncollectible adjustment
21	OH	Vectren	05-1444-GA-UNC	9/13/2006	Difference in actual WN revenues, rate case revenues, adjusted for growth in customers. Actual and target revenues are reconciled	Residential sales/ trans: general sales / trans	New rate effective November 1 annually,	
22	OR	Northwest	Renew: UG 163	8/22/2003 Initial: 9/12/02; renew 8/25/05	Partial decoupling: Base line rate case per customer adjusted for price elasticity compared to actual WN UPC	Res 1, 2 Commercial 1, 3, 31	Annual, eff Oct 1 each year; adj based on deferred balance as of June 30.	Separate WNA
23	UT	Questar Gas	Docket No. 05-057-T01	5/26/2006	Difference between rate case margin per customer, and actual revenue, times actual monthly customers, Reconciling	GS-1, GSS	Semiannually, adjustment to base rates made to amortize current balance over 12 months	WNA: separate

	State	Company	Docket number	Date of Decision	Basis for Rate Adjustments	Classes	Period	Additional Information; Additional Clauses
24	WA	Avista	UG 060518	12/21/2005	Actual WN sales, with new customers removed, compared to TY monthly sales. revenues calculated by multiplying sales diff by approved rate; 90% of diff is deferred Deferral subject to ESM and DSM performance Impact capped at 2%; difference remains in deferred.	RS 101 (residential and small commercial)	Annual, July – June; new adjustment effective Sept 1 Nov 07 – Oct 2010	Tax Adjustment
25	WA	Cascade Natural Gas Corp	UG-060256	1/12/2007	Difference between rate case margin per customer and actual WN margin per customer times actual customers Actual and target revenues reconciled	RS 503, 504 (Residential, Commercial)	Annual	

IN THE MATTER OF THE PETITION OF PIVOTAL UTILITY HOLDINGS, INC. D/B/A ELIZABETHTOWN GAS FOR APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE AND OTHER TARIFF REVISIONS
BPU DOCKET NO. GR09030195

RM

RCR-COC-27

Q. Please explain why the Risk Premium analyses on Schedule RAM-3 are based on electric (or primarily electric) utilities rather than gas utilities. Please identify the utilities comprising the S&P Utility Index which is cited on that schedule.

A. In view of the scarcity of publicly-traded, dividend-paying, pure-play natural gas distributors, Dr. Morin examined a sample of combination gas and electric utilities as proxies. As stated in Dr. Morin's testimony, it is reasonable to postulate that the Company's natural gas utility operations possess an investment risk profile similar to the combination gas and electric utility business. The latter are reasonable proxies for they possess economic characteristics very similar to those of natural gas utilities. They are both involved in the transmission-distribution of energy services products at regulated rates in cyclical and weather-sensitive markets. They both employ a capital-intensive network with similar physical characteristics. They are both subject to rate of return regulation and have enjoyed virtually identical allowed rates of return, attesting to their risk comparability. Finally, the necessary data to conduct Dr. Morin's historical risk premium analysis on the electric utility industry is available for a much longer period than the corresponding data for the natural gas utility industry, namely 1930-2008.

For the companies that make up the S&P Utility Index, see attachment RCR-COC-27.1.

	Ticker S5UTIL	Name
1	AES UN Equity	AES Corp
2	AYE UN Equity	Allegheny Energy Inc
3	AEE UN Equity	Ameren Corp
4	AEP UN Equity	American Electric Power
5	CNP UN Equity	Centerpoint Energy Inc
6	CMS UN Equity	CMS Energy Corp
7	ED UN Equity	Consolidated Edison Inc
8	CEG UN Equity	Constellation Energy Group
9	D UN Equity	Dominion Resources
10	DTE UN Equity	DTE Energy Co
11	DUK UN Equity	Duke Energy Corp
12	DYN UN Equity	Dynegy Inc
13	EIX UN Equity	Edison International
14	ETR UN Equity	Entergy Corp
15	EXC UN Equity	Exelon Corp
16	FE UN Equity	FirstEnergy Corp
17	FPL UN Equity	FPL Group Inc
18	TEG UN Equity	Integrys Energy Group
19	GAS UN Equity	Nicor Inc
20	NI UN Equity	NiSource Inc
21	POM UN Equity	Pepco Holdings Inc
22	PCG UN Equity	PG&E Corp
23	PNW UN Equity	Pinnacle West Capital Corp
24	PPL UN Equity	PPL Corp
25	PGN UN Equity	Progress Energy Inc
26	PEG UN Equity	Public Service Enterprise Group
27	STR UN Equity	Questar Corp
28	SRE UN Equity	Sempra Energy
29	SO UN Equity	Southern Co
30	TE UN Equity	TECO Energy Inc
31	WEC UN Equity	Wisconsin Energy Corp
32	XEL UN Equity	Xcel Energy Inc

IN THE MATTER OF THE PETITION OF PIVOTAL UTILITY HOLDINGS, INC. D/B/A ELIZABETHTOWN GAS FOR APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE AND OTHER TARIFF REVISIONS
BPU DOCKET NO. GR09030195

RM/MM

RCR-COC-36

Q. Please update RCR-COC-7 through June 2009.

A. Please see attached RCR-COC-36.1.

Schedule of Short-term Debt, Revolving Credit Agreements
Based on Consolidated AGL Resources
For the twelve months ended June 30, 2009

Month	(1) Average Daily Balance	(2) Monthly Cost	(3) Annualized Cost	(4) Cost Rate
Jul-08	466,128,585	1,400,084	16,801,007	3.60%
Aug-08	558,945,392	1,466,091	17,593,096	3.15%
Sep-08	650,339,286	1,537,550	18,450,601	2.84%
Oct-08	750,176,285	2,353,793	28,245,518	3.77%
Nov-08	835,159,642	3,007,332	36,087,984	4.32%
Dec-08	884,085,308	1,880,805	22,569,665	2.55%
Jan-09	806,588,168	681,633	8,179,601	1.01%
Feb-09	631,261,449	698,978	8,387,736	1.33%
Mar-09	474,855,546	468,492	5,621,903	1.18%
Apr-09	335,535,514	825,837	9,910,045	2.95%
May-09	283,526,356	207,699	2,492,393	0.88%
Jun-09	340,534,136	485,454	5,825,453	1.71%

Column (3) = Column (2) x 12
Column (4) = Column (3)/Column (1)

IN THE MATTER OF THE PETITION OF PIVOTAL UTILITY HOLDINGS, INC. D/B/A ELIZABETHTOWN GAS FOR APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE AND OTHER TARIFF REVISIONS
BPU DOCKET NO. GR09030195

RM

RCR-COC-37

Q. RCR-COC-28 requested an update to Exhibit RAM-3 for 2008 data. The response indicated that 2008 data were not yet in Dr. Morin's possession. Please provide the update for 2008 if the data now are available.

A. Please see attached RCR-COC-37.1.

Exhibit RAM-3 Utility Industry Historical Risk Premium

Line No.	Year	(1) Utlity A-Rated Bond Yield	(2) 20 year Maturity Bond Value	(3) Gain/Loss	(4) Interest	(5) Bond Total Return	(6) S&P Utility Index Return	(7) Utility Equity Risk Premium Over Bond Returns	(8) Utility Equity Risk Premium Over Bond Yields
1	1931	5.12%	1,000.00						
2	1932	6.46%	850.73	-149.27	51.20	-9.81%	-0.54%	9.27%	-7.00%
3	1933	6.32%	1,015.77	15.77	64.60	8.04%	-21.87%	-29.91%	-28.19%
4	1934	5.50%	1,098.72	98.72	63.20	16.19%	-20.41%	-36.60%	-25.91%
5	1935	4.61%	1,115.47	115.47	55.00	17.05%	76.63%	59.58%	72.02%
6	1936	4.08%	1,071.99	71.99	46.10	11.81%	20.69%	8.88%	16.61%
7	1937	3.98%	1,013.70	13.70	40.80	5.45%	-37.04%	-42.49%	-41.02%
8	1938	3.90%	1,011.04	11.04	39.80	5.08%	22.45%	17.37%	18.55%
9	1939	3.52%	1,054.23	54.23	39.00	9.32%	11.26%	1.94%	7.74%
10	1940	3.24%	1,040.98	40.98	35.20	7.62%	-17.15%	-24.77%	-20.39%
11	1941	3.07%	1,025.27	25.27	32.40	5.77%	-31.57%	-37.34%	-34.64%
12	1942	3.09%	997.03	-2.97	30.70	2.77%	15.39%	12.62%	12.30%
13	1943	2.99%	1,014.97	14.97	30.90	4.59%	46.07%	41.48%	43.08%
14	1944	2.97%	1,003.00	3.00	29.90	3.29%	18.03%	14.74%	15.06%
15	1945	2.87%	1,015.14	15.14	29.70	4.48%	53.33%	48.85%	50.46%
16	1946	2.71%	1,024.58	24.58	28.70	5.33%	1.26%	-4.07%	-1.45%
17	1947	2.78%	989.32	-10.68	27.10	1.64%	-13.16%	-14.80%	-15.94%
18	1948	3.02%	964.17	-35.83	27.80	-0.80%	4.01%	4.81%	0.99%
19	1949	2.90%	1,018.11	18.11	30.20	4.83%	31.39%	26.56%	28.49%
20	1950	2.79%	1,016.77	16.77	29.00	4.58%	3.25%	-1.33%	0.46%
21	1951	3.11%	952.61	-47.39	27.90	-1.95%	18.63%	20.58%	15.52%
22	1952	3.24%	980.97	-19.03	31.10	1.21%	19.25%	18.04%	16.01%
23	1953	3.49%	964.23	-35.77	32.40	-0.34%	7.85%	8.19%	4.36%
24	1954	3.16%	1,048.65	48.65	34.90	8.35%	24.72%	16.37%	21.56%
25	1955	3.22%	991.20	-8.80	31.60	2.28%	11.26%	8.98%	8.04%
26	1956	3.56%	951.65	-48.35	32.20	-1.62%	5.06%	6.68%	1.50%
27	1957	4.24%	908.92	-91.08	35.60	-5.55%	6.36%	11.91%	2.12%
28	1958	4.20%	1,005.38	5.38	42.40	4.78%	40.70%	35.92%	36.50%
29	1959	4.78%	925.83	-74.17	42.00	-3.22%	7.49%	10.71%	2.71%
30	1960	4.78%	1,000.00	0.00	47.80	4.78%	20.26%	15.48%	15.48%
31	1961	4.62%	1,020.74	20.74	47.80	6.85%	29.33%	22.48%	24.71%
32	1962	4.54%	1,010.44	10.44	46.20	5.66%	-2.44%	-8.10%	-6.98%

Exhibit RAM-3 Utility Industry Historical Risk Premium

Line No.	Year	(1) Utlity A-Rated Bond Yield	(2) 20 year Maturity Bond Value	(3) Gain/Loss	(4) Interest	(5) Bond Total Return	(6) S&P Utility Index Return	(7) Utility Equity Risk Premium Over Bond Returns	(8) Utility Equity Risk Premium Over Bond Yields
33	1963	4.39%	1,019.83	19.83	45.40	6.52%	12.36%	5.84%	7.97%
34	1964	4.52%	983.00	-17.00	43.90	2.69%	15.91%	13.22%	11.39%
35	1965	4.58%	992.20	-7.80	45.20	3.74%	4.67%	0.93%	0.09%
36	1966	5.39%	901.59	-98.41	45.80	-5.26%	-4.48%	0.78%	-9.87%
37	1967	5.87%	943.94	-56.06	53.90	-0.22%	-0.63%	-0.41%	-6.50%
38	1968	6.51%	928.99	-71.01	58.70	-1.23%	10.32%	11.55%	3.81%
39	1969	7.54%	894.48	-105.52	65.10	-4.04%	-15.42%	-11.38%	-22.96%
40	1970	8.69%	891.81	-108.19	75.40	-3.28%	16.56%	19.84%	7.87%
41	1971	8.16%	1,051.83	51.83	86.90	13.87%	2.41%	-11.46%	-5.75%
42	1972	7.72%	1,044.47	44.47	81.60	12.61%	8.15%	-4.46%	0.43%
43	1973	7.84%	987.98	-12.02	77.20	6.52%	-18.07%	-24.59%	-25.91%
44	1974	9.50%	852.57	-147.43	78.40	-6.90%	-21.55%	-14.65%	-31.05%
45	1975	10.09%	949.69	-50.31	95.00	4.47%	44.49%	40.02%	34.40%
46	1976	9.29%	1,072.11	72.11	100.90	17.30%	31.81%	14.51%	22.52%
47	1977	8.61%	1,064.35	64.35	92.90	15.72%	8.64%	-7.08%	0.03%
48	1978	9.29%	938.71	-61.29	86.10	2.48%	-3.71%	-6.19%	-13.00%
49	1979	10.49%	900.41	-99.59	92.90	-0.67%	13.58%	14.25%	3.09%
50	1980	13.34%	802.50	-197.50	104.90	-9.26%	15.08%	24.34%	1.74%
51	1981	15.95%	843.97	-156.03	133.40	-2.26%	11.74%	14.00%	-4.21%
52	1982	15.86%	1,005.41	5.41	159.50	16.49%	26.52%	10.03%	10.66%
53	1983	13.66%	1,149.59	149.59	158.60	30.82%	20.01%	-10.81%	6.35%
54	1984	14.03%	975.38	-24.62	136.60	11.20%	26.04%	14.84%	12.01%
55	1985	12.47%	1,113.97	113.97	140.30	25.43%	33.05%	7.62%	20.58%
56	1986	9.58%	1,255.25	255.25	124.70	37.99%	28.53%	-9.46%	18.95%
57	1987	10.10%	955.69	-44.31	95.80	5.15%	-2.92%	-8.07%	-13.02%
58	1988	10.49%	967.63	-32.37	101.00	6.86%	18.27%	11.41%	7.78%
59	1989	9.77%	1,062.76	62.76	104.90	16.77%	47.80%	31.03%	38.03%
60	1990	9.86%	992.20	-7.80	97.70	8.99%	-2.57%	-11.56%	-12.43%
61	1991	9.36%	1,044.85	44.85	98.60	14.34%	14.61%	0.27%	5.25%
62	1992	8.69%	1,063.03	63.03	93.60	15.66%	8.10%	-7.56%	-0.59%
63	1993	7.59%	1,112.26	112.26	86.90	19.92%	14.41%	-5.51%	6.82%
64	1994	8.31%	930.36	-69.64	75.90	0.63%	-7.94%	-8.57%	-16.25%
65	1995	7.89%	1,041.91	41.91	83.10	12.50%	42.15%	29.65%	34.26%

Exhibit RAM-3 Utility Industry Historical Risk Premium

Line No.	Year	(1) Utlity A-Rated Bond Yield	(2) 20 year Maturity Bond Value	(3) Gain/Loss	(4) Interest	(5) Bond Total Return	(6) S&P Utility Index Return	(7) Utility Equity Risk Premium Over Bond Returns	(8) Utility Equity Risk Premium Over Bond Yields
66	1996	7.75%	1,014.12	14.12	78.90	9.30%	3.14%	-6.16%	-4.61%
67	1997	7.60%	1,015.30	15.30	77.50	9.28%	24.69%	15.41%	17.09%
68	1998	7.04%	1,059.61	59.61	76.00	13.56%	14.82%	1.26%	7.78%
69	1999	7.62%	940.94	-59.06	70.40	1.13%	-8.85%	-9.98%	-16.47%
70	2000	8.24%	939.72	-60.28	76.20	1.59%	59.70%	58.11%	51.46%
71	2001	7.78%	1,046.28	46.28	82.40	12.87%	-30.41%	-43.28%	-38.19%
72	2002	7.37%	1,042.55	42.55	77.80	12.03%	-30.04%	-42.07%	-37.41%
73	2003	6.58%	1,087.17	87.17	73.70	16.09%	26.11%	10.02%	19.53%
74	2004	6.16%	1,047.92	47.92	65.80	11.37%	24.22%	12.85%	18.06%
75	2005	5.65%	1,060.65	60.65	61.60	12.22%	16.79%	4.57%	11.14%
76	2006	6.07%	951.73	-48.27	56.50	0.82%	20.95%	20.13%	14.88%
77	2007	6.07%	1,000.00	0.00	60.70	6.07%	19.36%	13.29%	13.29%
78	2008	6.53%	949.04	-50.96	60.70	0.97%	-28.99%	-29.96%	-35.52%
80	**Mean**							**4.5%**	**4.5%**

Source: Bloomberg Web site: Standard & Poors Utility Stock Index % Annual Change, Dec. to Dec.
Bond yields from Bloomberg

IN THE MATTER OF THE PETITION OF PIVOTAL UTILITY HOLDINGS, INC. D/B/A ELIZABETHTOWN GAS FOR APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE AND OTHER TARIFF REVISIONS
BPU DOCKET NO. GR09030195

MM

RCR-COC-39

Q. Please provide the complete basis for the assumed 8.0 percent cost rate for the $250 million planned long-term debt issue. If the Company has a revised estimate, please provide.

A. The 8% estimate was based on indicative pricing from various financial institutions during Q1 of 2009. Based on recent reviews of the current market, the Company expects to issue the debt in the 6.5% - 7.5% range.