Thomas R. Teehan
Senior Counsel

June 12, 2012

VIA HAND DELIVERY & ELECTRONIC MAIL

Luly E. Massaro, Commission Clerk
Rhode Island Public Utilities Commission
89 Jefferson Boulevard
Warwick, RI 02888

RE: Docket 4323 - Application for Approval of a Change in Electric and Gas Base Distribution Rates Pursuant to R.I.G.L. Sections 39-3-10 and 39-3-11
Responses to Division Data Requests - Set 3 - ELEC/GAS

Dear Ms. Massaro:

Enclosed is an original and ten (10) copies of National Grid's[1] responses to the Division's Third Set of Data Requests in the above-captioned proceeding.

The responses to the Third Set included with this filing are listed in the enclosed discovery log.

Thank you for your attention to this transmittal. If you have any questions, please feel free to contact me at (401) 784-7667.

Very truly yours,

Thomas R. Teehan

Enclosures

cc: Docket 4323 Service List
Leo Wold, Esq.
Steve Scialabba, Division

[1] The Narragansett Electric Company d/b/a National Grid (herein referred to as "National Grid" or the "Company").

280 Melrose Street, Providence, RI 02907
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Certificate of Service

I hereby certify that a copy of the cover letter and/or any materials accompanying this certificate were electronically submitted, hand delivered and mailed to the individuals listed below.

__/S/_____ June 12, 2012
Janea Dunne Date

National Grid (NGrid) – Request for Change in Electric & Gas Distribution Rates
Docket No. 4323 – Service List updated on 6/8/12

Name/Address	E-mail Distribution	Phone
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Matthew Kahal c/o Exeter Associates 10480 Little Patuxent Parkway Suite 300 Columbia, MD 21044	mkahal@exeterassociates.com	
File original & 11 copies w/: Luly E. Massaro, Commission Clerk Public Utilities Commission 89 Jefferson Blvd. Warwick, RI 02888	Lmassaro@puc.state.ri.us Anault@puc.state.ri.us Adalessandro@puc.state.ri.us Nucci@puc.state.ri.us Dshah@puc.state.ri.us Sccamara@puc.state.ri.us	401-780-2107

DATA SET	DATA REQUEST	DATE ISSUED	DATE FILED	WITNESS	ATTACHMENT	CONFIDENTIAL ATTACHMENT
DIVISION SET 1						
Division Set 1	Division 1-1-ELEC	5/9/2012	**5/25/2012**	Michael D. Laflamme	Att. DIV 1-1-ELEC	
Division Set 1	Division 1-2-ELEC	5/9/2012	**5/25/2012**	Michael D. Laflamme	Att. DIV 1-2-ELEC	
Division Set 1	Division 1-3-ELEC	5/9/2012	**5/25/2012**	Michael D. Laflamme	Att. DIV 1-3-ELEC	
Division Set 1	Division 1-4-ELEC	5/9/2012	**5/25/2012**	Michael D. Laflamme	Att. DIV 1-4-ELEC	
Division Set 1	Division 1-5-ELEC	5/9/2012	**5/25/2012**	Michael D. Laflamme		
Division Set 1	Division 1-6-ELEC	5/9/2012	**5/23/2012**	Michael D. Laflamme	Att. DIV 1-6-ELEC	
Division Set 1	Division 1-7-ELEC	5/9/2012	**5/23/2012**	Michael D. Laflamme		
Division Set 1	Division 1-8-ELEC	5/9/2012	**5/25/2012**	Michael D. Laflamme	Att. DIV 1-8-ELEC	
Division Set 1	Division 1-9-ELEC	5/9/2012	**5/23/2012**	Michael D. Laflamme	Att. DIV 1-9-ELEC	
Division Set 1	Division 1-10-ELEC	5/9/2012	**5/25/2012**	Michael D. Laflamme		
Division Set 1	Division 1-11-ELEC	5/9/2012	**5/23/2012**	Michael D. Laflamme	Att. DIV 1-11-ELEC	
Division Set 1	Division 1-12-ELEC	5/9/2012	**5/23/2012**	Michael D. Laflamme		
Division Set 1	Division 1-13-ELEC	5/9/2012	**5/23/2012**	Michael D. Laflamme	Att. DIV 1-13-ELEC	
Division Set 1	Division 1-14-ELEC	5/9/2012	**5/23/2012**	Michael D. Laflamme		
Division Set 1	Division 1-15-ELEC	5/9/2012	**5/23/2012**	Michael D. Laflamme		
Division Set 1	Division 1-16-ELEC	5/9/2012	**5/23/2012**	Michael D. Laflamme		
Division Set 1	Division 1-17-ELEC	5/9/2012	**5/23/2012**	Michael D. Laflamme		
Division Set 1	Division 1-18-ELEC	5/9/2012	**5/23/2012**	Michael D. Laflamme		
Division Set 1	Division 1-19-ELEC	5/9/2012	**5/23/2012**	Michael D. Laflamme		
Division Set 1	Division 1-20-ELEC	5/9/2012	**5/25/2012**	Michael D. Laflamme		
Division Set 1	Division 1-21-ELEC	5/9/2012	**5/23/2012**	Michael D. Laflamme	Att. DIV 1-21-ELEC	
Division Set 1	Division 1-22-ELEC	5/9/2012	**5/23/2012**	Michael D. Laflamme		
Division Set 1	Division 1-23-ELEC	5/9/2012	**5/23/2012**	Michael D. Laflamme	Att. DIV 1-23-ELEC	
Division Set 1	Division 1-24-ELEC	5/9/2012	**5/25/2012**	Michael D. Laflamme		
Division Set 1	Division 1-25-ELEC	5/9/2012	**5/23/2012**	Michael D. Laflamme		
Division Set 1	Division 1-26-ELEC	5/9/2012	**5/23/2012**	Michael D. Laflamme		
Division Set 1	Division 1-27-ELEC	5/9/2012	**5/23/2012**	Michael D. Laflamme	Att. DIV 1-27-ELEC	
Division Set 1	Division 1-28-ELEC	5/9/2012	**5/23/2012**	Michael D. Laflamme		

DATA SET	DATA REQUEST	DATE ISSUED	DATE FILED	WITNESS	ATTACHMENT	CONFIDENTIAL ATTACHMENT
Division Set 1	Division 1-29-ELEC	5/9/2012	**5/23/2012**	Michael D. Laflamme	Att. DIV 1-29-ELEC	
Division Set 1	Division 1-30-ELEC	5/9/2012	**5/23/2012**	Michael D. Laflamme		
Division Set 1	Division 1-31-ELEC	5/9/2012	**5/23/2012**	Michael D. Laflamme		
DIVISION SET 2						
Division Set 2	Division 2-1-GAS	5/14/2012	**5/25/2012**	Michael D. Laflamme	Att. DIV 2-1-GAS	
Division Set 2	Division 2-2-GAS	5/14/2012	**5/25/2012**	Michael D. Laflamme	Att. DIV 2-2-GAS	
Division Set 2	Division 2-3-GAS	5/14/2012	**5/25/2012**	Michael D. Laflamme		
Division Set 2	Division 2-4-GAS	5/14/2012	**5/25/2012**	Michael D. Laflamme	Att. DIV 2-4-GAS	
Division Set 2	Division 2-5-GAS	5/14/2012	**5/25/2012**	Michael D. Laflamme		
Division Set 2	Division 2-6-GAS	5/14/2012	**5/25/2012**	Michael D. Laflamme	Att. DIV 2-6-GAS	
Division Set 2	Division 2-7-GAS	5/14/2012	**5/25/2012**	Michael D. Laflamme	Att. DIV 2-7-GAS	
Division Set 2	Division 2-8-GAS	5/14/2012	**5/25/2012**	Michael D. Laflamme	Att. DIV 2-8-GAS	
Division Set 2	Division 2-9-GAS	5/14/2012	**5/25/2012**	Michael D. Laflamme	Att. DIV 2-9-GAS	
Division Set 2	Division 2-10-GAS	5/14/2012	**5/29/2012**	Michael D. Laflamme		
Division Set 2	Division 2-11-GAS	5/14/2012	**5/29/2012**	Michael D. Laflamme		
Division Set 2	Division 2-12-GAS	5/14/2012	**5/25/2012**	Michael D. Laflamme	Att. DIV 2-12-GAS	
Division Set 2	Division 2-13-GAS	5/14/2012	**5/29/2012**	Michael D. Laflamme		
Division Set 2	Division 2-14-GAS	5/14/2012	**5/29/2012**	Michael D. Laflamme		
Division Set 2	Division 2-15-GAS	5/14/2012	**5/29/2012**	Michael D. Laflamme		
Division Set 2	Division 2-16-GAS	5/14/2012	**5/29/2012**	Michael D. Laflamme	Att. DIV 2-16-1-GAS Att. DIV 2-16-2-GAS Att. DIV 2-16-3-GAS	
Division Set 2	Division 2-17-GAS	5/14/2012	**5/29/2012**	Michael D. Laflamme		
Division Set 2	Division 2-18-GAS	5/14/2012	**5/29/2012**	Michael D. Laflamme		
Division Set 2	Division 2-19-GAS	5/14/2012	**5/29/2012**	Michael D. Laflamme		
Division Set 2	Division 2-20-GAS	5/14/2012	**5/29/2012**	Michael D. Laflamme		
Division Set 2	Division 2-21-GAS	5/14/2012	**5/29/2012**	Michael D. Laflamme	Att. DIV 2-21-GAS	
Division Set 2	Division 2-22-GAS	5/14/2012	**5/29/2012**	Michael D. Laflamme	Att. DIV 2-22-GAS	
Division Set 2	Division 2-23-GAS	5/14/2012	**5/29/2012**	Michael D. Laflamme	Att. DIV 2-23-GAS	
Division Set 2	Division 2-24-GAS	5/14/2012	**5/29/2012**	Michael D. Laflamme		
Division Set 2	Division 2-25-GAS	5/14/2012	**5/29/2012**	Michael D. Laflamme		

DATA SET	DATA REQUEST	DATE ISSUED	DATE FILED	WITNESS	ATTACHMENT	CONFIDENTIAL ATTACHMENT
DIVISION SET 3						
Division Set 3	Division 3-1-ELEC/GAS	5/30/2012	**6/11/2012**	Michael D. Laflamme	Att. DIV 3-1-ELEC/GAS	
Division Set 3	Division 3-2-ELEC/GAS	5/30/2012	*Pending*	Michael D. Laflamme		
Division Set 3	Division 3-3-ELEC/GAS	5/30/2012	**6/12/2012**	Robert B. Hevert	Att. DIV 3-3-ELEC/GAS	
Division Set 3	Division 3-4-ELEC/GAS	5/30/2012	**6/12/2012**	Robert B. Hevert		
Division Set 3	Division 3-5-ELEC/GAS	5/30/2012	**6/12/2012**	Robert B. Hevert	Att. DIV 3-5-ELEC/GAS	
Division Set 3	Division 3-6-ELEC/GAS	5/30/2012	*Pending*	Michael D. Laflamme		
Division Set 3	Division 3-7-ELEC/GAS	5/30/2012	**6/11/2012**	Michael D. Laflamme	Att. DIV 3-7-1-ELEC/GAS Att. DIV 3-7-2-ELEC/GAS Att. DIV 3-7-3-ELEC/GAS	
Division Set 3	Division 3-8-ELEC/GAS	5/30/2012	**6/12/2012**	Legal Department and Robert B. Hevert		
Division Set 3	Division 3-9-ELEC/GAS	5/30/2012	**6/11/2012**	Mustally Husain	Att. DIV 3-9-1-ELEC/GAS Att. DIV 3-9-2-ELEC/GAS Att. DIV 3-9-3-ELEC/GAS Att. DIV 3-9-4-ELEC/GAS Att. DIV 3-9-5-ELEC/GAS Att. DIV 3-9-6-ELEC/GAS Att. DIV 3-9-7-ELEC/GAS Att. DIV 3-9-8-ELEC/GAS Att. DIV 3-9-9-ELEC/GAS	
Division Set 3	Division 3-10-ELEC/GAS	5/30/2012	**6/11/2012**	Mustally Husain	Att. DIV 3-10-ELEC/GAS	
Division Set 3	Division 3-11-ELEC/GAS	5/30/2012	**6/11/2012**	Michael D. Laflamme	Att. DIV 3-11-ELEC/GAS	
Division Set 3	Division 3-12-ELEC/GAS	5/30/2012	**6/11/2012**	Michael D. Laflamme		
Division Set 3	Division 3-13-ELEC/GAS	5/30/2012	**6/11/2012**	Michael D. Laflamme		
Division Set 3	Division 3-14-ELEC/GAS	5/30/2012	*Pending*	Michael D. Laflamme		
Division Set 3	Division 3-15-ELEC/GAS	5/30/2012	**6/11/2012**	Michael D. Laflamme		
Division Set 3	Division 3-16-ELEC/GAS	5/30/2012	**6/11/2012**	Michael D. Laflamme		
Division Set 3	Division 3-17-ELEC/GAS	5/30/2012	**6/11/2012**	Michael D. Laflamme	Att. DIV 3-17-ELEC/GAS	
Division Set 3	Division 3-18-ELEC/GAS	5/30/2012	**6/12/2012**	Robert B. Hevert		
Division Set 3	Division 3-19-ELEC	5/30/2012	**6/12/2012**	Robert B. Hevert		
Division Set 3	Division 3-20-ELEC/GAS	5/30/2012	**6/12/2012**	Robert B. Hevert		
Division Set 3	Division 3-21-ELEC/GAS	5/30/2012	**6/12/2012**	Robert B. Hevert		
Division Set 3	Division 3-22-ELEC/GAS	5/30/2012	**6/12/2012**	Robert B. Hevert	Att. DIV 3-22-ELEC/GAS	
Division Set 3	Division 3-23-ELEC/GAS	5/30/2012	**6/12/2012**	Robert B. Hevert	Att. DIV 3-23-ELEC/GAS	
Division Set 3	Division 3-24-ELEC/GAS	5/30/2012	*Pending*	Robert B. Hevert		

DATA SET	DATA REQUEST	DATE ISSUED	DATE FILED	WITNESS	ATTACHMENT	CONFIDENTIAL ATTACHMENT
Division Set 3	Division 3-25-ELEC/GAS	5/30/2012	**6/12/2012**	Robert B. Hevert	Att. DIV 3-25-ELEC/GAS	
Division Set 3	Division 3-26-ELEC/GAS	5/30/2012	**6/12/2012**	Robert B. Hevert		
Division Set 3	Division 3-27-ELEC/GAS	5/30/2012	**6/12/2012**	Robert B. Hevert		

DATA SET	DATA REQUEST	DATE ISSUED	DATE FILED	WITNESS	ATTACHMENT	CONFIDENTIAL ATTACHMENT
COMMISSION SET 1						
Commission Set 1	Commission 1-1-ELEC/GAS	5/24/2012	**6/6/2012**	Michael D. Laflamme		
Commission Set 1	Commission 1-2-ELEC/GAS	5/24/2012	**6/7/2012**	Maureen P. Heaphy		
Commission Set 1	Commission 1-3-ELEC/GAS	5/24/2012	**6/7/2012**	Michael D. Laflamme	Att. COMM 1-3-1-ELEC/GAS Att. COMM 1-3-2-ELEC/GAS	
Commission Set 1	Commission 1-4-ELEC/GAS	5/24/2012	**6/7/2012**	Timothy D. Horan		
Commission Set 1	Commission 1-5-ELEC/GAS	5/24/2012	**6/6/2012**	Maureen P. Heaphy		
Commission Set 1	Commission 1-6-ELEC	5/24/2012	**6/7/2012**	Stephen F. Doucette and Maureen P. Heaphy		
Commission Set 1	Commission 1-7-ELEC	5/24/2012	**6/7/2012**	Stephen F. Doucette and Maureen P. Heaphy		
Commission Set 1	Commission 1-8-ELEC	5/24/2012	**6/6/2012**	Stephen F. Doucette		
Commission Set 1	Commission 1-9-ELEC	5/24/2012	**6/7/2012**	Stephen F. Doucette and Maureen P. Heaphy		
Commission Set 1	Commission 1-10-ELEC	5/24/2012	**6/6/2012**	Stephen F. Doucette		
Commission Set 1	Commission 1-11-ELEC	5/24/2012	**6/6/2012**	Stephen F. Doucette		
Commission Set 1	Commission 1-12-ELEC	5/24/2012	**6/6/2012**	Stephen F. Doucette		
Commission Set 1	Commission 1-13-ELEC/GAS	5/24/2012	**6/4/2012**	Evelyn M. Kaye		
Commission Set 1	Commission 1-14-ELEC/GAS	5/24/2012	**6/4/2012**	Evelyn M. Kaye		
Commission Set 1	Commission 1-15-ELEC/GAS	5/24/2012	**6/6/2012**	Evelyn M. Kaye		
Commission Set 1	Commission 1-16-ELEC/GAS	5/24/2012	**6/4/2012**	Evelyn M. Kaye and Michael D. Laflamme		
Commission Set 1	Commission 1-17-ELEC/GAS	5/24/2012	**6/4/2012**	Evelyn M. Kaye		
Commission Set 1	Commission 1-18-ELEC/GAS	5/24/2012	**6/4/2012**	Evelyn M. Kaye		
Commission Set 1	Commission 1-19-ELEC/GAS	5/24/2012	**6/4/2012**	Evelyn M. Kaye	Att. COMM 1-19-ELEC/GAS	
Commission Set 1	Commission 1-20-ELEC	5/24/2012	**6/6/2012**	Michael R. Hrycin	Att. COMM 1-20-1-ELEC Att. COMM 1-20-2-ELEC	
Commission Set 1	Commission 1-21-ELEC	5/24/2012	**6/6/2012**	Michael R. Hrycin	Att. COMM 1-21-ELEC	
Commission Set 1	Commission 1-22-ELEC	5/24/2012	**6/6/2012**	Michael R. Hrycin	Att. COMM 1-22-ELEC	
Commission Set 1	Commission 1-23-ELEC	5/24/2012	**6/7/2012**	Michael R. Hrycin		
Commission Set 1	Commission 1-24-ELEC	5/24/2012	**6/7/2012**	Michael R. Hrycin		
Commission Set 1	Commission 1-25-ELEC	5/24/2012	**6/6/2012**	Michael R. Hrycin		
Commission Set 1	Commission 1-26-ELEC	5/24/2012	**6/6/2012**	Michael R. Hrycin		
Commission Set 1	Commission 1-27-GAS	5/24/2012	**6/6/2012**	Jeffrey P. Martin		
Commission Set 1	Commission 1-28-GAS	5/24/2012	**6/6/2012**	Jeffrey P. Martin		
Commission Set 1	Commission 1-29-ELEC	5/24/2012	**6/4/2012**	Alfred P. Morrissey		

DATA SET	DATA REQUEST	DATE ISSUED	DATE FILED	WITNESS	ATTACHMENT	CONFIDENTIAL ATTACHMENT
COMMISSION SET 1						
Commission Set 1	Commission 1-30-ELEC	5/24/2012	**6/4/2012**	Alfred P. Morrissey		
Commission Set 1	Commission 1-31-ELEC	5/24/2012	**6/4/2012**	Alfred P. Morrissey		
Commission Set 1	Commission 1-32-ELEC	5/24/2012	**6/4/2012**	Alfred P. Morrissey		
Commission Set 1	Commission 1-33-ELEC	5/24/2012	**6/7/2012**	Alfred P. Morrissey		
Commission Set 1	Commission 1-34-ELEC	5/24/2012	**6/7/2012**	Alfred P. Morrissey		
Commission Set 1	Commission 1-35-ELEC/GAS	5/24/2012	**6/6/2012**	Michael D. Laflamme		
Commission Set 1	Commission 1-36-ELEC/GAS	5/24/2012	**6/7/2012**	Michael D. Laflamme	Att. COMM 1-36-ELEC/GAS	
Commission Set 1	Commission 1-37-GAS	5/24/2012	**6/7/2012**	Michael D. Laflamme		
Commission Set 1	Commission 1-38-ELEC	5/24/2012	**6/6/2012**	Michael D. Laflamme		
Commission Set 1	Commission 1-39-ELEC/GAS	5/24/2012	**6/7/2012**	Michael D. Laflamme		
Commission Set 1	Commission 1-40-ELEC/GAS	5/24/2012	**6/7/2012**	Ann E. Leary & Jeanne Lloyd	Att. COMM 1-40-ELEC/GAS	
Commission Set 1	Commission 1-41-ELEC/GAS	5/24/2012	**6/6/2012**	Robert B. Hevert		
Commission Set 1	Commission 1-42-ELEC/GAS	5/24/2012	**6/6/2012**	Michael D. Laflamme		
Commission Set 1	Commission 1-43-ELEC/GAS	5/24/2012	**6/6/2012**	Michael D. Laflamme		
Commission Set 1	Commission 1-44-ELEC/GAS	5/24/2012	**6/7/2012**	Maureen P. Heaphy	Att. COMM 1-44-ELEC/GAS	
Commission Set 1	Commission 1-45-ELEC/GAS	5/24/2012	**6/6/2012**	Stephen F. Doucette		
Commission Set 1	Commission 1-46-GAS	5/24/2012	**6/7/2012**	Ann E. Leary		

Division 3-3-ELEC/GAS

Request:

Please provide a workpaper showing how Mr. Hevert derived the common equity balance at 12/31/11 that he used for capital structure purposes. The response should quantify his adjustments for (a) goodwill; and (b) Other Comprehensive Income.

Response:

Please see Attachment DIV 3-3-ELEC/GAS, which is an electronic version of Mr. Hevert's Schedule RBH-8. Please note that the wording for footnote "*" was changed slightly for clarification.

Prepared by or under the supervision of: Robert B. Hevert

	Capital Structure As of Dec 31, 2011		Ratemaking Adjustments	Capital Structure For Ratemaking Purposes		Financing Petition	Capital Structure For Ratemaking Purposes After Financing	
	Balance ($000)	Ratio	Balance ($000)	Balance ($000)	Ratio	Balance ($000)	Balance ($000)	Ratio
Long-Term Debt	604,339	26.7%		604,339	39.2%	150,000	754,339	49.0%
Short-Term Debt*	168,950	7.5%		168,950	11.0%	(150,000)	18,950	1.2%
Preferred Stock	2,454	0.1%		2,454	0.2%		2,454	0.2%
Common Equity (1)	1,489,739	65.8%	(724,810) (A)	764,930	49.6%		764,930	49.6%
Total Capitalization	2,265,483	100.0%		1,540,673	100.0%		1,540,673	100.0%

(1) Excludes Other Comprehensive Income
(A) Removal of goodwill
* Point in time short term debt balances are inappropriate to measure typical levels of short-term debt. Rather a normalized average over a period such as 12 months should be employed. Due to proposed term-out of short-term debt after approval of financing petition, the balance as of Dec 31, 2011 is presented above. [Note: footnote has changed from original version for clarification]

Division 3-4-ELEC/GAS

Request:

Please provide Mr. Hevert's rationale for removing Other Comprehensive Income from common equity and any Rhode Island precedents that he is relying on for (or that support) this adjustment.

Response:

Because Other Comprehensive Income represents unrealized gains or losses on pension and other assets, removing that item from common equity provides a more accurate measure of the Company's current equity used to fund long-term operations. It is Mr. Hevert's understanding that the Company has consistently presented its common equity excluding Other Comprehensive Income in prior rate cases in Rhode Island.

Prepared by or under the supervision of: Robert B. Hevert

Division 3-5-ELEC/GAS

Request:

For all utility rate cases within the past three years in which Mr. Hevert has submitted a recommendation on return on equity, please provide his return on equity recommendation.

Response:

Please see Attachment DIV 3-5-ELEC/GAS for a schedule of Mr. Hevert's ROE recommendations over the past three years.

EXPERT TESTIMONY OF ROBERT B. HEVERT

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT	RECOMMENDED ROE RANGE (%)	FINAL RECOMMENDED ROE (%)
Arizona Corporation Commission						
Southwest Gas Corporation	11/10	Southwest Gas Corporation	Docket No. G-01551A-10-0458	Return on Equity	10.50-11.25	11.00
Arkansas Public Service Commission						
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Arkansas Gas	01/07	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Arkansas Gas	Docket No. 06-161-U	Return on Equity	10.25-11.25	11.00 (if BDA Tariff not approved) 10.75 (if otherwise)
Colorado Public Utilities Commission						
Xcel Energy, Inc.	11/11	Public Service Company of Colorado	Docket No. 11AL-947E	Return on Equity (electric)	10.50-11.50	10.75
Xcel Energy, Inc.	12/10	Public Service Company of Colorado	Docket No. D-10AL-963G	Return on Equity (gas)	10.50-11.50	10.90
Atmos Energy Corporation	07/09	Atmos Energy Colorado-Kansas Division	Docket No. 09AL-507G	Return on Equity (gas)	10.50-11.50	11.25
Connecticut Department of Public Utility Control						
Southern Connecticut Gas Company	09/08	Southern Connecticut Gas Company	Docket No. 08-08-17	Return on Equity	10.50-11.50	11.00
Southern Connecticut Gas Company	12/07	Southern Connecticut Gas Company	Docket No. 05-03-17PH02	Return on Equity	10.00-11.25	10.00-11.25
Connecticut Natural Gas Corporation	12/07	Connecticut Natural Gas Corporation	Docket No. 06-03-04PH02	Return on Equity	10.00-11.25	10.00-11.25
Delaware Public Service Commission						
Potomac Electric Power Company	12/11	Delmarva Power & Light	Case No. 11-258	Return on Equity	10.50-11.25	10.75
District of Columbia Public Service Commission						
Potomac Electric Power Company	07/11	Potomac Electric Power Company	FC-1087	Return on Equity	10.50-11.25	10.75
Federal Energy Regulatory Commission						
PNM Resources	10/10	Public Service Company of New Mexico	Docket No. ER11-1915-000	Return on Equity	Not specified	12.25

EXPERT TESTIMONY OF ROBERT B. HEVERT

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT	RECOMMENDED ROE RANGE (%)	FINAL RECOMMENDED ROE (%)
Portland Natural Gas Transmission System	05/10	Portland Natural Gas Transmission System	Docket No. RP10-729-000	Return on Equity	Not specified	13.41
Florida Gas Transmission Company, LLC	10/09	Florida Gas Transmission Company, LLC	Docket No. RP10-21-000	Return on Equity	Not specified	13.88
Maritimes and Northeast Pipeline, LLC	07/09	Maritimes and Northeast Pipeline, LLC	Docket No. RP09-809-000	Return on Equity	Not specified	14.25
Spectra Energy	02/08	Saltville Gas Storage	Docket No. RP08-257-000	Return on Equity	12.54-14.34	13.50
Southwest Gas Storage Company	08/07	Southwest Gas Storage Company	Docket No. RP07-541-000	Return on Equity	11.00-13.60	13.00
Southwest Gas Storage Company	06/07	Southwest Gas Storage Company	Docket No. RP07-34-000	Return on Equity	11.00-13.60	13.00
Sea Robin Pipeline LLC	06/07	Sea Robin Pipeline LLC	Docket No. RP07-513-000	Return on Equity	11.00-13.70	13.50
Georgia Public Service Commission						
Atlanta Gas Light Company	05/10	Atlanta Gas Light Company	Docket No. 31647-U	Return on Equity	10.50-11.50	11.25
Illinois Commerce Commission						
Ameren Illinois Company d/b/a Ameren Illinois	02/11	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 11-0279	Return on Equity	10.75-11.25	11.00
Ameren Illinois Company d/b/a Ameren Illinois	02/11	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 11-0282	Return on Equity	10.50-11.00	10.75
Maryland Public Service Commission						
Delmarva Power & Light	12/11	Delmarva Power & Light	Case No. 9285	Return on Equity	10.50-11.25	10.75
Potomac Electric Power Company	12/11	Potomac Electric Power Company	Case No. 9286	Return on Equity	10.50-11.25	10.75
Delmarva Power & Light	12/10	Delmarva Power & Light	Case No. 9249	Return on Equity	10.50-11.25	10.75

EXPERT TESTIMONY OF ROBERT B. HEVERT

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT	RECOMMENDED ROE RANGE (%)	FINAL RECOMMENDED ROE (%)
Massachusetts Department of Public Utilities						
National Grid	08/09	Massachusetts Electric Company d/b/a National Grid	DPU 09-39	Revenue Decoupling and Return on Equity	Testimony focused on the effect of rate structures on ROE. Did not recommend ROE.	Testimony focused on the effect of rate structures on ROE. Did not recommend ROE.
National Grid	08/09	Massachusetts Electric Company and Nantucket Electric Company d/b/a National Grid	DPU 09-38	Return on Equity – Solar Generation	Testimony focused on the effect of rate structures on ROE. Did not recommend ROE.	Testimony focused on the effect of rate structures on ROE. Did not recommend ROE.
Bay State Gas Company	04/09	Bay State Gas Company	DTE 09-30	Return on Equity	Not specified	Testimony focused on the effect of rate structures on ROE. Did not recommend ROE.
Minnesota Public Utilities Commission						
Otter Tail Power Corporation	04/10	Otter Tail Power Company	Docket No. E-017/GR-10-239	Return on Equity	10.50-11.75	11.25
Minnesota Power a division of ALLETE, Inc.	11/09	Minnesota Power	Docket No. E015/GR-09-1151	Return on Equity	10.75-11.50	11.25
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	11/08	CenterPoint Energy Minnesota Gas	Docket No. G-008/GR-08-1075	Return on Equity	10.50-11.00	10.50 – 11.00
Otter Tail Power Corporation	10/07	Otter Tail Power Company	Docket No. E017/GR-07-1178	Return on Equity	10.75-11.75	11.25
Mississippi Public Service Commission						
CenterPoint Energy Resources, Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Mississippi Gas	07/09	CenterPoint Energy Mississippi Gas	Docket No. 09-UN-334	Return on Equity	10.50-11.50	11.25
Missouri Public Service Commission						
Ameren Corporation	02/12	Union Electric Company d/b/a Ameren Missouri	Case No. ER-2012-0166	Return on Equity	10.50-11.00	10.75
Ameren Corporation	09/10	Union Electric Company d/b/a AmerenUE	Case No. ER-2011-0028	Return on Equity	10.50-11.25	10.70

EXPERT TESTIMONY OF ROBERT B. HEVERT

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT	RECOMMENDED ROE RANGE (%)	FINAL RECOMMENDED ROE (%)
Ameren Corporation	06/10	Union Electric Company d/b/a AmerenUE	Case No. GR-2010-0363	Return on Equity	10.00-11.00	10.50
Nevada Public Utilities Commission						
Southwest Gas Corporation	04/12	Southwest Gas Corporation	Docket No. D-12-04005	Return on Equity	10.00-10.75	10.65
Nevada Power Company	06/11	Nevada Power Company	Docket No. 11-06006	Return on Equity	10.75-11.50	11.25
New Hampshire Public Utilities Commission						
EnergyNorth Natural Gas d/b/a National Grid NH	02/10	EnergyNorth Natural Gas d/b/a National Grid NH	Docket No. DG 10-017	Return on Equity	10.25-11.00	10.75
New Jersey Board of Public Utilities						
Atlantic City Electric	08/11	Atlantic City Electric	Docket No. ER11080469	Return on Equity	10.50-11.25	N/A
New Mexico Public Regulation Commission						
Xcel Energy, Inc.	02/11	Southwestern Public Service Company	Case No. 10-00395-UT	Return on Equity	10.75-11.50	11.25
Public Service Company of New Mexico	06/10	Public Service Company of New Mexico	Case No. 10-00086-UT	Return on Equity (electric)	Not specified	11.75
Public Service Company of New Mexico	09/08	Public Service Company of New Mexico	Case No. 08-00273-UT	Return on Equity (electric)	10.40-12.50	11.75
Xcel Energy, Inc.	07/07	Southwestern Public Service Company	Case No. 07-00319-UT	Return on Equity (electric)	10.75-11.25	10.75
New York State Public Service Commission						
Orange and Rockland Utilities, Inc.	07/11	Orange and Rockland Utilities, Inc.	Case No. 11-E-0408	Return on Equity (electric)	10.60-11.00	10.75
Orange and Rockland Utilities, Inc.	07/10	Orange and Rockland Utilities, Inc.	Case No. 10-E-0362	Return on Equity (electric)	Not specified	11.00
Consolidated Edison Company of New York, Inc.	11/09	Consolidated Edison Company of New York, Inc.	Case No. 09-G-0795	Return on Equity (gas)	Not specified	10.80 (11.30 if three year rate period is accepted)

EXPERT TESTIMONY OF ROBERT B. HEVERT

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT	RECOMMENDED ROE RANGE (%)	FINAL RECOMMENDED ROE (%)
Consolidated Edison Company of New York, Inc.	11/09	Consolidated Edison Company of New York, Inc.	Case No. 09-S-0794	Return on Equity (steam)	Not specified	10.80 (11.40 if four year rate period is accepted)
North Carolina Utilities Commission						
Dominion Resources Services, Inc.	03/12	Virginia Electric and Power Company d/b/a Dominion North Carolina Power	Docket No. E-22, Sub 479	Return on Equity (electric)	10.75-11.50	11.25
Duke Energy Carolinas, LLC	07/11	Duke Energy Carolinas, LLC	Docket no. E-7, Sub 989	Return on Equity (electric)	11.00-11.75	11.50
North Dakota Public Service Commission						
Otter Tail Power Company	11/08	Otter Tail Power Company	Docket No. 08-862	Return on Equity (electric)	11.00-11.75	11.25
Oklahoma Corporation Commission						
Oklahoma Gas & Electric Company	07/11	Oklahoma Gas & Electric Company	Cause No. PUD201100087	Return on Equity	10.75-11.50	11.00
CenterPoint Energy Resources Corp., d/b/a CenterPoint Energy Oklahoma Gas	03/09	CenterPoint Energy Oklahoma Gas	Docket No. PUD200900055	Return on Equity	Not specified	11.25
Rhode Island Public Utilities Commission						
National Grid RI – Gas	08/08	National Grid RI – Gas	Docket No. 3943	Revenue Decoupling and Return on Equity	NA	Testimony focused on the effect of rate structures on ROE. Did not recommend ROE.
South Carolina Public Service Commission						
Duke Energy Carolinas, LLC	08/11	Duke Energy Carolinas, LLC	Docket No. 2011-271-E	Return on Equity	11.00-11.75	11.50
South Carolina Electric & Gas	03/10	South Carolina Electric & Gas	Docket No. 2009-489-E	Return on Equity	10.70-11.90	11.60

EXPERT TESTIMONY OF ROBERT B. HEVERT

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT	RECOMMENDED ROE RANGE (%)	FINAL RECOMMENDED ROE (%)
South Dakota Public Utilities Commission						
Otter Tail Power Company	08/10	Otter Tail Power Company	Docket No. EL10-011	Return on Equity (electric)	11.00-11.50	11.25
Northern States Power Company	06/09	South Dakota Division of Northern States Power	Docket No. EL09-009	Return on Equity (electric)	11.00-12.00	11.50
Otter Tail Power Company	10/08	Otter Tail Power Company	Docket No. EL08-030	Return on Equity (electric)	11.00-11.75	11.25
Texas Public Utility Commission						
Oncor Electric Delivery Company, LLC	01/11	Oncor Electric Delivery Company, LLC	Docket No. 38929	Return on Equity	11.00-11.50	11.25
Texas-New Mexico Power Company	08/10	Texas-New Mexico Power Company	Docket No. 38480	Return on Equity (electric)	11.00-11.75	11.50
CenterPoint Energy Houston Electric, LLC	06/10	CenterPoint Energy Houston Electric, LLC	Docket No. 38339	Return on Equity (electric)	11.00-11.50	11.25
Xcel Energy, Inc.	05/10	Southwestern Public Service	Docket No. 38147	Return on Equity (electric)	11.00-11.50	11.35
Texas-New Mexico Power Company	08/08	Texas-New Mexico Power Company	Docket No. 36025	Return on Equity (electric)	10.75-11.75	11.25
Texas Railroad Commission						
Centerpoint Energy Resources Corp. d/b/a Centerpoint Energy Entex and Centerpoint Energy Texas Gas	12/10	Centerpoint Energy Resources Corp. d/b/a Centerpoint Energy Entex and Centerpoint Energy Texas Gas	GUD 10038	Return on Equity	Not specified	11.00
Atmos Pipeline – Texas	09/10	Atmos Pipeline – Texas	GUD 10000	Return on Equity	11.50-13.25	12.75
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	07/09	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	GUD 9902	Return on Equity	10.50-11.25	11.25
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Texas Gas	03/08	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Texas Gas	GUD 9791	Return on Equity	10.25-11.25	11.00

EXPERT TESTIMONY OF ROBERT B. HEVERT

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT	RECOMMENDED ROE RANGE (%)	FINAL RECOMMENDED ROE (%)
Utah Public Service Commission						
Questar Gas Company	12/07	Questar Gas Company	Docket No. 07-057-13	Return on Equity	10.25-11.25	11.25
Vermont Public Service Board						
Central Vermont Public Service	12/10	Central Vermont Public Service	Docket No. 7627	Return on Equity	10.06-11.48	10.22

Division 3-8-ELEC/GAS

Request:

Is it the position of either Mr. Hevert or the Company that the Commission is precluded by Rhode Island statute from using the parent company capital structure or considering parent company debt in setting the ratemaking capital structure in this case? Please explain fully the Company's position on this question in light of Mr. Hevert's testimony cite to Rhode Island statute and his reference to the so-called "stand alone" language.

Response:

Yes, given the facts of this case, including the fact that the Company's actual capital structure is in line with industry norms for gas and electric distribution companies, it would not be consistent with the statutory language to use the parent company capital structure or consider parent company debt in the ratemaking process. §39-1-27.7.1 (b) of the Act Relating to Public Utilities and Carriers – Revenue Decoupling (the "Decoupling Act"), which was signed into law on May 20, 2010, specifically requires that "[a]ctions taken by the commission in the exercise of its ratemaking authority for electric and gas rate cases shall be within the norm of industry standards and recognize the need to maintain the financial health of the distribution company *as a stand-alone entity* in Rhode Island." [*Emphasis added*] It is the Company's view, therefore, that the National Grid plc capital structure has no bearing on the capital structure to be used in setting the Company's rates.

In addition, the Company finances its rate base on a stand-alone basis. In fact, as shown on Table 1 (below), the Company is a separately rated company, currently carrying Long-Term Issuer, Senior Secured, Senior Unsecured, and Preferred Stock credit ratings from Standard & Poor's, and Moody's Investor Service.

Table 1: Narragansett Electric Company Credit Ratings

Standard & Poor's[1]	**Moody's Investor Service**[2]
Corporate Credit Rating: A-	Issuer: A3
Senior Secured Debt: A	First Mortgage Bonds: A1
Senior Unsecured Debt: A-	Senior Secured MTNs: (P)A1
Preferred Stock: BBB	Senior Unsecured: A3
	Preferred Stock: Baa2

[1] Standard & Poor's, *Narragansett Electric Company*, September 26, 2011

[2] Moody's Investors Service, *Narragansett Electric Company*, June 28, 2011. (P) indicates "Provisional"

Division 3-18-ELEC/GAS

Request:

One of Mr. Hevert's methods is the multi-stage DCF. Please state the weight that Mr. Hevert places on this method in formulating his recommendation.

Response:

Mr. Hevert does not assign specific weight to any of the analyses he conducts. Rather, as noted on page 75 of his Direct Testimony, Mr. Hevert's "recommended return on equity considers the results of the DCF and CAPM models, as well as the Bond Yield Plus Risk Premium analysis," and the specific risks to which the Company remains exposed. Based on those analytical results, the Company's ROE falls in a range between 10.50 percent and 11.25 percent and, within that range, an authorized ROE of 10.75 percent is reasonable, particularly in light of the Company's regulatory and business risks relative to the proxy group.

Prepared by or under the supervision of: Robert B. Hevert

Division 3-19-ELEC/GAS

Request:

Please provide any analysis or evaluation conducted by Mr. Hevert of NEC's cost of equity at present as compared to NEC's cost of equity at the time of its last base rate case when the Commission awarded the Company a return on equity of 9.8 percent.

Response:

Mr. Hevert has not calculated the Company's Cost of Equity as of the time of its most recent rate award. In pages 10 through 17 of his Direct Testimony, however, Mr. Hevert addresses capital market conditions; that analysis includes early 2010, when the Commission awarded the Company a 9.80 percent ROE.

Prepared by or under the supervision of: Robert B. Hevert

Division 3-20-ELEC/GAS

Request:

Mr. Hevert applies weightings of 73 percent electric and 27 percent gas in determining an overall NEC utility cost of equity. Please explain why he did not instead utilize the NEC electric and gas rate bases, as identified by Mr. Horan, as his gas versus electric weights.

Response:

As noted on pages 20 and 40 of his Direct Testimony, Mr. Hevert considered both operating income and plant in service in arriving at the relative weights of the Company's electric and gas operations. Mr. Hevert did not use the Company's electric and gas rate base amounts, nor its plant in service, exclusively, to derive his gas versus electric weights because he believes that operating income is an important factor in characterizing business segment operations. In that regard, Mr. Hevert believes that investment decisions are driven by earnings potential and cash flows and that operating income best incorporates a measure of proven earnings potential for each business unit. He similarly applies this methodology in his approach to proxy group selection (see Mr. Hevert's Direct Testimony, pages 21 - 24), in which he screens potential electric and gas proxy companies based, in part, on operating income. Mr. Hevert's analysis is based on publicly available financial data as would be available to investors making a similar determination.

Prepared by or under the supervision of: Robert B. Hevert

Division 3-21-ELEC/GAS

Request:

Mr. Hevert uses a long-term GDP growth rate of 5.77 percent in his multi-stage DCF study. What DCF result would his multi-stage model produce if he instead used a third-stage (or nominal GDP) growth rate of 4.77 percent instead of 5.77 percent?

Response:

Mr. Hevert has not performed an analysis that included a 4.77 percent long term GDP growth rate nor did he rely on such an analysis to develop his ROE recommendation. As such, Mr. Hevert cannot comment on what the DCF result would be had he performed such an analysis.

Division 3-22-ELEC/GAS

Request:

Per pages 39-40 of Mr. Hevert's testimony, please provide the source and source documents for the 66.78 percent electric and 69.50 percent long-term payout ratios used in his multi-stage DCF model.

Response:

Mr. Hevert imported historical earnings per share and dividends per share data from Bloomberg to derive his long-term industry median payout ratio for electric and gas utilities. Please refer to Attachment DIV 3-22-ELEC/GAS for the Bloomberg data and Mr. Hevert's calculations.

Prepared by or under the supervision of: Robert B. Hevert

Zero DPS	0.00
Negative EPS	
Errors	

Average Median	0.6678

ALE US Equity				LNT US Equity				AEE US Equity			
Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS	
12/31/1990	3.555	2.79	0.78481	12/31/1990	2.23	1.74	0.7803	12/29/1995	2.72	#N/A N/A	
12/31/1991	3.69	2.85	0.772358	12/31/1991	2.43	1.8	0.7407	12/31/1996	2.71	#N/A N/A	
12/31/1992	3.705	2.91	0.785425	12/31/1992	2.1	1.86	0.8857	12/31/1997	2.439	0	0
12/31/1993	3.3	2.97	0.9	12/31/1993	2.11	1.9	0.9005	12/31/1998	2.817	2.54	0.9017
12/30/1994	3.09	3.03	0.980583	12/30/1994	2.13	1.92	0.9014	12/31/1999	2.81	2.54	0.9039
12/29/1995	3.24	3.06	0.944444	12/29/1995	1.9	1.94	1.0211	12/29/2000	3.33	2.54	0.7628
12/31/1996	3.42	3.06	0.894737	12/31/1996	2.34	1.97	0.8419	12/31/2001	3.41	2.54	0.7449
12/31/1997	3.705	3.06	0.825911	12/31/1997	1.8971	2	1.0542	12/31/2002	2.61	2.54	0.9732
12/31/1998	4.05	3.06	0.755556	12/31/1998	1.257	2	1.5911	12/31/2003	3.25	2.54	0.7815
12/31/1999	2.91	3.21	1.103093	12/31/1999	2.51	2	0.7968	12/31/2004	2.84	2.54	0.8944
12/29/2000	6.36	3.21	0.504717	12/29/2000	5.05	2	0.396	12/30/2005	3.02	2.54	0.8411
12/31/2001	5.49	3.21	0.584699	12/31/2001	2.14	2	0.9346	12/29/2006	2.66	2.54	0.9549
12/31/2002	5.07	3.3	0.650888	12/31/2002	1.18	2	1.6949	12/31/2007	2.98	2.54	0.8523
12/31/2003	8.55	3.39	0.396491	12/31/2003	1.81	1	0.5525	12/31/2008	2.88	2.54	0.8819
12/31/2004	3.69	2.8425	0.770325	12/31/2004	1.28	1.0125	0.791	12/31/2009	2.78	1.54	0.554
12/30/2005	0.49	1.245	2.540816	12/30/2005	-0.07	1.05		12/31/2010	0.58	1.54	2.6552
12/29/2006	2.75	1.45	0.527273	12/29/2006	2.7	1.15	0.4259	12/30/2011	2.15	1.555	0.7233
12/31/2007	3.09	1.64	0.530744	12/31/2007	3.79	1.27	0.3351				
12/31/2008	2.82	1.72	0.609929	12/31/2008	2.61	1.4	0.5364				
12/31/2009	1.89	1.76	0.931217	12/31/2009	1.01	1.5	1.4851				
12/31/2010	2.2	1.76	0.8	12/31/2010	2.6	1.58	0.6077				
12/30/2011	2.66	1.78	0.669173	12/30/2011	2.74	1.7	0.6204				
			0.778584				0.7968				0.8523

Source: Bloomberg

AEP US Equity				AVA US Equity				BKH US Equity				CNP US Equity			
Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS	
12/31/1990	2.65	2.4	0.9057	12/31/1990	1.73	1.24	0.7168	12/31/1990	1.1156	0.7289	0.6534	12/31/1990	1.335	1.48	1.1086
12/31/1991	2.7	2.4	0.8889	12/31/1991	1.34	1.24	0.9254	12/31/1991	1.1067	0.7822	0.7068	12/31/1991	1.62	1.48	0.9136
12/31/1992	2.54	2.4	0.9449	12/31/1992	1.37	1.24	0.9051	12/31/1992	1.1533	0.8267	0.7168	12/31/1992	1.68	1.49	0.8869
12/31/1993	1.92	2.4	1.25	12/31/1993	1.44	1.24	0.8611	12/31/1993	1.1067	0.8533	0.771	12/31/1993	1.6	1.5	0.9375
12/30/1994	2.71	2.4	0.8856	12/30/1994	1.28	1.24	0.9688	12/30/1994	1.1067	0.88	0.7952	12/30/1994	1.625	1.5	0.9231
12/29/1995	2.85	2.4	0.8421	12/29/1995	1.41	1.24	0.8794	12/29/1995	1.1867	0.8933	0.7528	12/29/1995	4.46	1.5	0.3363
12/31/1996	3.14	2.4	0.7643	12/31/1996	1.35	1.24	0.9185	12/31/1996	1.4	0.92	0.6571	12/31/1996	1.66	1.5	0.9036
12/31/1997	2.703	2.4	0.8879	12/31/1997	1.96	1.24	0.6327	12/31/1997	1.49	0.9467	0.6354	12/31/1997	1.66	1.5	0.9036
12/31/1998	2.811	2.4	0.8538	12/31/1998	1.28	1.05	0.8203	12/31/1998	1.19	1	0.8403	12/31/1998	-0.5	1.5	
12/31/1999	3.03	2.4	0.7921	12/31/1999	0.12	0.48	4	12/31/1999	1.73	1.04	0.6012	12/31/1999	5.2	1.5	0.2885
12/29/2000	0.83	2.4	2.8916	12/29/2000	1.49	0.48	0.3221	12/29/2000	2.39	1.08	0.4519	12/29/2000	1.57	1.5	0.9554
12/31/2001	3.01	2.4	0.7973	12/31/2001	0.21	0.48	2.2857	12/31/2001	3.45	1.12	0.3246	12/31/2001	3.38	1.5	0.4438
12/31/2002	-1.57	2.4		12/31/2002	0.6	0.48	0.8	12/31/2002	2.28	1.16	0.5088	12/31/2002	-13.16	1.07	
12/31/2003	0.29	1.65	5.6897	12/31/2003	0.9	0.49	0.5444	12/31/2003	2	1.2	0.6	12/31/2003	1.59	0.4	0.2516
12/31/2004	2.75	1.4	0.5091	12/31/2004	0.73	0.515	0.7055	12/31/2004	1.78	1.24	0.6966	12/31/2004	-2.94	0.4	
12/30/2005	2.09	1.42	0.6794	12/30/2005	0.93	0.545	0.586	12/30/2005	1.02	1.28	1.2549	12/30/2005	0.81	0.4	0.4938
12/29/2006	2.54	1.5	0.5906	12/29/2006	1.48	0.57	0.3851	12/29/2006	2.44	1.32	0.541	12/29/2006	1.39	0.6	0.4317
12/31/2007	2.73	1.58	0.5788	12/31/2007	0.73	0.595	0.8151	12/31/2007	2.66	1.37	0.515	12/31/2007	1.25	0.68	0.544
12/31/2008	3.43	1.64	0.4781	12/31/2008	1.37	0.69	0.5036	12/31/2008	2.75	1.4	0.5091	12/31/2008	1.32	0.73	0.553
12/31/2009	2.96	1.64	0.5541	12/31/2009	1.59	0.81	0.5094	12/31/2009	2.11	1.42	0.673	12/31/2009	1.02	0.76	0.7451
12/31/2010	2.53	1.71	0.6759	12/31/2010	1.66	1	0.6024	12/31/2010	1.76	1.44	0.8182	12/31/2010	1.08	0.78	0.7222
12/30/2011	4.02	1.85	0.4602	12/30/2011	1.73	1.1	0.6358	12/30/2011	1.25	1.46	1.168	12/30/2011	3.19	0.79	0.2476
			0.7973				0.7584				0.6651				0.7222

CV US Equity				CHG US Equity				CNL US Equity				CMS US Equity			
Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS	
12/31/1990	1.62	1.3733	0.8477	12/31/1990	2.38	1.8	0.7563	12/31/1990	0.925	0.6325	0.6838	12/31/1990	-6.07	0.42	
12/31/1991	1.6533	1.3867	0.8387	12/31/1991	2.4	1.88	0.7833	12/31/1991	0.96	0.6625	0.6901	12/31/1991	-3.44	0.48	
12/31/1992	1.7133	1.3867	0.8094	12/31/1992	2.65	1.96	0.7396	12/31/1992	0.965	0.685	0.7098	12/31/1992	-3.72	0.48	
12/31/1993	1.64	1.065	0.6494	12/31/1993	2.68	2.03	0.7575	12/31/1993	0.89	0.705	0.7921	12/31/1993	1.9	0.6	0.3158
12/30/1994	1.08	1.42	1.3148	12/30/1994	2.68	4.16	1.5522	12/30/1994	0.96	0.725	0.7552	12/30/1994	2.09	0.78	0.3732
12/29/1995	1.53	0.6	0.3922	12/29/1995	2.74	#N/A N/A		12/29/1995	1.04	0.745	0.7163	12/29/1995	2.26	0.9	0.3982
12/31/1996	1.51	0.84	0.5563	12/31/1996	2.99	2.11	0.7057	12/31/1996	1.115	0.765	0.6861	12/31/1996	2.45	1.02	0.4163
12/31/1997	1.25	0.88	0.704	12/31/1997	2.9742	2.13	0.7162	12/31/1997	1.12	0.785	0.7009	12/31/1997	2.39	1.14	0.477
12/31/1998	0.18	0.88	4.8889	12/31/1998	2.9	2.155	0.7431	12/31/1998	1.149	0.805	0.7006	12/31/1998	2.65	1.26	0.4755
12/31/1999	1.28	0.88	0.6875	12/31/1999	2.88	2.16	0.75	12/31/1999	1.215	0.825	0.679	12/31/1999	2.18	1.39	0.6376
12/29/2000	1.42	0.88	0.6197	12/29/2000	3.05	2.16	0.7082	12/29/2000	1.405	0.845	0.6014	12/29/2000	0.38	1.46	3.8421
12/31/2001	0.06	0.88	14.667	12/31/2001	3.11	2.16	0.6945	12/31/2001	1.52	0.87	0.5724	12/31/2001	-3.51	1.46	
12/31/2002	1.56	0.88	0.5641	12/31/2002	2.53	2.16	0.8538	12/31/2002	1.51	0.895	0.5927	12/31/2002	-4.68	1.09	
12/31/2003	1.57	0.88	0.5605	12/31/2003	2.78	2.16	0.777	12/31/2003	-0.79	0.9		12/31/2003	-0.3	#N/A N/A	
12/31/2004	1.93	0.92	0.4767	12/31/2004	2.69	2.16	0.803	12/31/2004	1.33	0.9	0.6767	12/31/2004	0.65	#N/A N/A	
12/30/2005	0.49	0.92	1.8776	12/30/2005	2.81	2.16	0.7687	12/30/2005	3.54	0.9	0.2542	12/30/2005	-0.44	0	
12/29/2006	1.67	0.92	0.5509	12/29/2006	2.73	2.16	0.7912	12/29/2006	1.36	0.9	0.6618	12/29/2006	-0.41	0	
12/31/2007	1.52	0.92	0.6053	12/31/2007	2.7	2.16	0.8	12/31/2007	2.55	0.9	0.3529	12/31/2007	-1.02	0.2	
12/31/2008	1.53	0.92	0.6013	12/31/2008	2.22	2.16	0.973	12/31/2008	1.7	0.9	0.5294	12/31/2008	1.25	0.36	0.288
12/31/2009	1.75	0.92	0.5257	12/31/2009	2.76	2.16	0.7826	12/31/2009	1.77	0.9	0.5085	12/31/2009	0.96	#N/A N/A	
12/31/2010	1.66	0.92	0.5542	12/31/2010	2.44	2.16	0.8852	12/31/2010	4.23	0.975	0.2305	12/31/2010	1.4	0.66	0.4714
12/30/2011	0.4	0.92	2.3	12/30/2011	2.97	2.19	0.7374	12/30/2011	3.24	1.1225	0.3465	12/30/2011	1.66	0.84	0.506
			0.6346				0.7687				0.6767				0.4714

ED US Equity				CEG US Equity				D US Equity				DTE US Equity			
Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS	
12/31/1990	2.32	1.82	0.7845	12/31/1990	1.4	1.4	1	12/31/1990	1.46	1.1167	0.7649	12/31/1990	3.26	1.78	0.546
12/31/1991	2.32	1.86	0.8017	12/31/1991	1.6733	1.4	0.8367	12/31/1991	1.47	1.1567	0.7869	12/31/1991	3.64	1.88	0.5165
12/31/1992	2.46	1.9	0.7724	12/31/1992	1.63	1.43	0.8773	12/31/1992	1.38	1.2	0.8696	12/31/1992	3.79	1.98	0.5224
12/31/1993	2.66	1.94	0.7293	12/31/1993	1.85	1.47	0.7946	12/31/1993	1.56	1.24	0.7949	12/31/1993	3.34	2.06	0.6168
12/30/1994	2.98	2	0.6711	12/30/1994	1.93	1.51	0.7824	12/30/1994	1.405	1.275	0.9075	12/30/1994	2.67	2.06	0.7715
12/29/1995	2.93	2.04	0.6962	12/29/1995	2.02	1.55	0.7673	12/29/1995	1.225	1.29	1.0531	12/29/1995	2.8	2.06	0.7357
12/31/1996	2.93	2.08	0.7099	12/31/1996	1.85	1.59	0.8595	12/31/1996	1.325	1.29	0.9736	12/31/1996	2.13	2.06	0.9671
12/31/1997	2.954	2.1	0.7109	12/31/1997	1.72	1.63	0.9477	12/31/1997	1.075	1.29	1.2	12/31/1997	2.88	2.06	0.7153
12/31/1998	3.042	2.12	0.6969	12/31/1998	2.06	1.67	0.8107	12/31/1998	1.375	1.29	0.9382	12/31/1999	3.33	2.06	0.6186
12/31/1999	3.14	2.14	0.6815	12/31/1999	1.74	1.68	0.9655	12/31/1999	0.775	1.29	1.6645	12/29/2000	3.27	2.06	0.63
12/29/2000	2.75	2.18	0.7927	12/29/2000	2.3	1.68	0.7304	12/29/2000	0.925	1.29	1.3946	12/31/2001	2.17	2.06	0.9493
12/31/2001	3.22	2.2	0.6832	12/31/2001	0.57	0.48	0.8421	12/31/2001	1.085	1.29	1.1889	12/31/2002	3.85	2.06	0.5351
12/31/2002	3.03	2.22	0.7327	12/31/2002	3.2	0.96	0.3	12/31/2002	2.425	1.29	0.532	12/31/2003	3.11	2.06	0.6624
12/31/2003	2.39	2.24	0.9372	12/31/2003	1.67	1.04	0.6228	12/31/2003	0.5	1.29	2.58	12/31/2004	2.5	2.06	0.824
12/31/2004	2.28	2.26	0.9912	12/31/2004	3.14	1.14	0.3631	12/31/2004	1.9	1.3	0.6842	12/30/2005	3.07	2.06	0.671
12/30/2005	2.95	2.28	0.7729	12/30/2005	3.51	1.34	0.3818	12/30/2005	1.51	1.34	0.8874	12/29/2006	2.44	2.075	0.8504
12/29/2006	2.96	2.3	0.777	12/29/2006	5.22	1.51	0.2893	12/29/2006	1.97	1.38	0.7005	12/31/2007	5.73	2.12	0.37
12/31/2007	3.49	2.32	0.6648	12/31/2007	4.55	1.74	0.3824	12/31/2007	3.9	1.46	0.3744	12/31/2008	3.37	2.12	0.6291
12/31/2008	4.38	2.34	0.5342	12/31/2008	-7.34	1.91		12/31/2008	3.17	1.58	0.4984	12/31/2009	3.24	2.12	0.6543
12/31/2009	3.16	2.36	0.7468	12/31/2009	22.29	0.96	0.0431	12/31/2009	2.17	1.75	0.8065	12/31/2010	3.75	2.18	0.5813
12/31/2010	3.49	2.38	0.6819	12/31/2010	-4.9	0.96		12/31/2010	4.77	1.83	0.3836	12/30/2011	4.19	2.32	0.5537
12/30/2011	3.59	2.4	0.6685	12/30/2011	-1.7	0.96		12/30/2011	2.46	1.97	0.8008				
			0.7201				0.7824				0.838				0.63

DUK US Equity				EIX US Equity				EE US Equity				EDE US Equity			
Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS	
12/31/1990	1.2	0.8	0.6667	12/31/1990	1.8	1.31	0.7278	12/31/1996	0.523	0	0	12/31/1990	1.56	1.1725	0.7516
12/31/1991	1.3	0.84	0.6462	12/31/1991	1.605	1.35	0.8411	12/31/1997	0.643	0	0	12/31/1991	1.43	1.22	0.8531
12/31/1992	1.105	0.88	0.7964	12/31/1992	1.66	1.39	0.8373	12/31/1998	0.76	0	0	12/31/1992	1.26	1.2575	0.998
12/31/1993	1.4	0.92	0.6571	12/31/1993	1.43	1.415	0.9895	12/31/1999	0.476	0	0	12/31/1993	1.16	1.28	1.1034
12/30/1994	1.44	0.96	0.6667	12/30/1994	1.52	1.105	0.727	12/29/2000	1.08	0	0	12/30/1994	1.32	1.28	0.9697
12/29/1995	1.625	1	0.6154	12/29/1995	1.66	0.75	0.4518	12/31/2001	1.25	0	0	12/29/1995	1.18	1.28	1.0847
12/31/1996	1.425	1.04	0.7298	12/31/1996	1.64	1.25	0.7622	12/31/2002	0.58	0	0	12/31/1996	1.23	1.28	1.0407
12/31/1997	1.255	1.08	0.8606	12/31/1997	1.75	1	0.5714	12/31/2003	1.24	0	0	12/31/1997	1.2878	1.28	0.9939
12/31/1998	1.705	1.1	0.6452	12/31/1998	1.86	1.04	0.5591	12/31/2004	0.74	0	0	12/31/1998	1.53	1.28	0.8366
12/31/1999	2.04	1.1	0.5392	12/31/1999	1.79	1.08	0.6034	12/30/2005	0.75	0	0	12/31/1999	1.13	1.28	1.1327
12/29/2000	2.39	1.1	0.4603	12/29/2000	-5.84	0.84		12/29/2006	1.42	0	0	12/29/2000	1.35	1.28	0.9481
12/31/2001	2.45	1.1	0.449	12/31/2001	3.18	#N/A N/A		12/31/2007	1.64	0	0	12/31/2001	0.59	1.28	2.1695
12/31/2002	1.22	1.1	0.9016	12/31/2002	3.31	0	0	12/31/2008	1.73	0	0	12/31/2002	1.19	1.28	1.0756
12/31/2003	-1.48	1.1		12/31/2003	2.52	0.2	0.0794	12/31/2009	1.5	0	0	12/31/2003	1.29	1.28	0.9922
12/31/2004	1.59	1.1	0.6918	12/31/2004	2.81	0.85	0.3025	12/31/2010	2.32	0	0	12/31/2004	0.86	1.28	1.4884
12/30/2005	1.94	1.17	0.6031	12/30/2005	3.47	1.02	0.2939	12/30/2011	2.49	0.66	0.2651	12/30/2005	0.92	1.28	1.3913
12/29/2006	1.59	1.26	0.7925	12/29/2006	3.58	1.1	0.3073					12/29/2006	1.39	1.28	0.9209
12/31/2007	1.19	0.86	0.7227	12/31/2007	3.33	1.175	0.3529					12/31/2007	1.09	1.28	1.1743
12/31/2008	1.08	0.9	0.8333	12/31/2008	3.69	1.225	0.332					12/31/2008	1.17	1.28	1.094
12/31/2009	0.83	0.94	1.1325	12/31/2009	2.59	1.245	0.4807					12/31/2009	1.18	1.28	1.0847
12/31/2010	1	0.97	0.97	12/31/2010	3.84	1.265	0.3294					12/31/2010	1.17	1.28	1.094
12/30/2011	1.28	0.99	0.7734	12/30/2011	-0.11	1.285						12/30/2011	1.31	0.64	0.4885
			0.6918				0.4807				0				1.0581

ETR US Equity				EXC US Equity				FE US Equity				NEE US Equity			
Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS	
12/31/1990	2.44	1.05	0.4303	12/31/1997	-3.4	0.9		12/29/1995	2.05	#N/A N/A		12/31/1990	-1.43	1.17	
12/31/1991	2.64	1.25	0.4735	12/29/2000	1.455	0.455	0.3127	12/31/1996	2.1	#N/A N/A		12/31/1991	0.74	1.195	1.6149
12/31/1992	2.48	1.45	0.5847	12/31/2001	2.23	0.634	0.2843	12/31/1997	1.94	1.5	0.7732	12/31/1992	1.325	1.215	0.917
12/31/1993	3.16	1.65	0.5222	12/31/2002	2.235	0.88	0.3937	12/31/1998	1.82	1.5	0.8242	12/31/1993	1.15	1.235	1.0739
12/30/1994	1.49	1.8	1.2081	12/31/2003	1.39	0.96	0.6906	12/31/1999	2.5	1.5	0.6	12/30/1994	1.455	0.94	0.646
12/29/1995	2.28	1.8	0.7895	12/31/2004	2.82	1.26	0.4468	12/29/2000	2.69	1.5	0.5576	12/29/1995	1.58	0.88	0.557
12/31/1996	1.83	1.8	0.9836	12/30/2005	1.38	1.6	1.1594	12/31/2001	2.82	1.5	0.5319	12/31/1996	1.665	0.92	0.5526
12/31/1997	1.03	1.8	1.7476	12/29/2006	2.37	1.6	0.6751	12/31/2002	2.15	1.5	0.6977	12/31/1997	1.785	0.96	0.5378
12/31/1998	3	1.5	0.5	12/31/2007	4.08	1.76	0.4314	12/31/2003	1.39	1.5	1.0791	12/31/1998	1.925	1	0.5195
12/31/1999	2.25	1.2	0.5333	12/31/2008	4.16	2.03	0.488	12/31/2004	2.68	1.9125	0.7136	12/31/1999	2.035	1.04	0.5111
12/29/2000	3	1.215	0.405	12/31/2009	4.1	2.1	0.5122	12/30/2005	2.62	1.705	0.6508	12/29/2000	2.07	1.08	0.5217
12/31/2001	3.29	1.275	0.3875	12/31/2010	3.88	2.1	0.5412	12/29/2006	3.84	1.85	0.4818	12/31/2001	2.315	1.12	0.4838
12/31/2002	2.69	1.34	0.4981	12/30/2011	3.76	2.1	0.5585	12/31/2007	4.27	2.05	0.4801	12/31/2002	1.37	1.16	0.8467
12/31/2003	4.09	1.6	0.3912					12/31/2008	4.41	2.2	0.4989	12/31/2003	2.505	1.2	0.479
12/31/2004	4.01	1.89	0.4713					12/31/2009	3.31	2.2	0.6647	12/31/2004	2.475	1.3	0.5253
12/30/2005	4.27	2.16	0.5059					12/31/2010	2.44	2.2	0.9016	12/30/2005	2.37	1.42	0.5992
12/29/2006	5.46	2.16	0.3956					12/30/2011	2.22	2.2	0.991	12/29/2006	3.25	1.5	0.4615
12/31/2007	5.77	2.58	0.4471									12/31/2007	3.3	1.64	0.497
12/31/2008	6.39	3	0.4695									12/31/2008	4.1	1.78	0.4341
12/31/2009	6.39	3	0.4695									12/31/2009	3.99	1.89	0.4737
12/31/2010	6.72	3.24	0.4821									12/31/2010	4.77	2	0.4193
12/30/2011	7.59	3.32	0.4374									12/30/2011	4.62	2.2	0.4762
			0.4778				0.5001				0.6647				0.5217

GXP US Equity				HE US Equity				IDA US Equity				TEG US Equity			
Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS	
12/31/1990	1.555	1.31	0.8424	12/31/1990	1.01	1.085	1.0743	12/31/1990	1.91	1.86	0.9738	12/31/1990	2	1.64	0.82
12/31/1991	1.58	1.37	0.8671	12/31/1991	1.2	1.105	0.9208	12/31/1991	1.56	1.86	1.1923	12/31/1991	2.23	1.68	0.7534
12/31/1992	1.35	1.43	1.0593	12/31/1992	-0.24	1.125		12/31/1992	1.55	1.86	1.2	12/31/1992	2.35	1.72	0.7319
12/31/1993	1.66	1.46	0.8795	12/31/1993	0.94	1.145	1.2181	12/31/1993	2.14	1.86	0.8692	12/31/1993	2.47	1.76	0.7126
12/30/1994	1.64	1.5	0.9146	12/30/1994	1.3	1.165	0.8962	12/30/1994	1.8	1.86	1.0333	12/30/1994	2.21	1.8	0.8145
12/29/1995	1.92	1.54	0.8021	12/29/1995	1.33	1.185	0.891	12/29/1995	2.1	1.86	0.8857	12/29/1995	2.32	1.84	0.7931
12/31/1996	1.69	1.59	0.9408	12/31/1996	1.3	1.205	0.9269	12/31/1996	2.21	1.86	0.8416	12/31/1996	2	1.88	0.94
12/31/1997	1.18	1.62	1.3729	12/31/1997	1.3776	1.22	0.8856	12/31/1997	2.32	1.86	0.8017	12/31/1997	2.1	1.92	0.9143
12/31/1998	1.89	1.64	0.8677	12/31/1998	1.3245	1.24	0.9362	12/31/1998	2.37	1.86	0.7848	12/31/1998	1.76	1.96	1.1136
12/31/1999	1.26	1.66	1.3175	12/31/1999	1.505	1.24	0.8239	12/31/1999	2.43	1.86	0.7654	12/31/1999	2.24	2	0.8929
12/29/2000	2.54	1.66	0.6535	12/29/2000	0.705	1.24	1.7589	12/29/2000	3.72	1.86	0.5	12/29/2000	2.53	2.04	0.8063
12/31/2001	-0.42	1.66		12/31/2001	1.24	1.24	1	12/31/2001	3.35	1.86	0.5552	12/31/2001	2.75	2.08	0.7564
12/31/2002	1.99	1.66	0.8342	12/31/2002	1.63	1.24	0.7607	12/31/2002	1.63	1.86	1.1411	12/31/2002	3.45	2.12	0.6145
12/31/2003	2.07	1.66	0.8019	12/31/2003	1.53	1.24	0.8105	12/31/2003	1.22	1.695	1.3893	12/31/2003	2.87	2.16	0.7526
12/31/2004	2.49	1.66	0.6667	12/31/2004	1.38	1.24	0.8986	12/31/2004	1.9	1.2	0.6316	12/31/2004	3.74	2.2	0.5882
12/30/2005	2.15	1.66	0.7721	12/30/2005	1.57	1.24	0.7898	12/30/2005	1.51	1.2	0.7947	12/30/2005	4.11	2.24	0.545
12/29/2006	1.62	1.66	1.0247	12/29/2006	1.33	1.24	0.9323	12/29/2006	2.51	1.2	0.4781	12/29/2006	3.68	2.28	0.6196
12/31/2007	1.86	1.66	0.8925	12/31/2007	1.03	1.24	1.2039	12/31/2007	1.86	1.2	0.6452	12/31/2007	3.51	2.56	0.7293
12/31/2008	1.51	1.66	1.0993	12/31/2008	1.07	1.24	1.1589	12/31/2008	2.18	1.2	0.5505	12/31/2008	1.65	2.68	1.6242
12/31/2009	1.15	0.83	0.7217	12/31/2009	0.91	1.24	1.3626	12/31/2009	2.64	1.2	0.4545	12/31/2009	-0.91	2.72	
12/31/2010	1.55	0.83	0.5355	12/31/2010	1.22	1.24	1.0164	12/31/2010	2.96	1.2	0.4054	12/31/2010	2.85	2.72	0.9544
12/30/2011	1.27	0.835	0.6575	12/30/2011	1.45	1.24	0.8552	12/30/2011	3.37	1.2	0.3561	12/30/2011	2.89	2.72	0.9412
			0.8671				0.9269				0.7898				0.7931

ITC US Equity			
Date	IS_EPS	EQY_DPS	
12/31/2003	#N/A N/	0	
12/31/2004	#N/A N/	0	
12/30/2005	1.1	0.525	0.4773
12/29/2006	0.95	1.075	1.1316
12/31/2007	1.73	1.13	0.6532
12/31/2008	2.25	1.19	0.5289
12/31/2009	2.62	1.25	0.4771
12/31/2010	2.89	1.31	0.4533
12/30/2011	3.36	1.375	0.4092
			0.4773

MGEE US Equity			
Date	IS_EPS	EQY_DPS	
12/31/1990	1.36	1.1467	0.8432
12/31/1991	1.52	1.1644	0.7661
12/31/1992	1.4533	1.1933	0.8211
12/31/1993	1.5067	1.2267	0.8142
12/30/1994	1.5267	1.2467	0.8166
12/29/1995	1.4867	1.26	0.8475
12/31/1996	0.4	1.2733	3.1833
12/31/1997	1.4	1.287	0.9193
12/31/1998	1.38	1.3	0.942
12/31/1999	1.48	1.308	0.8838
12/29/2000	1.67	1.318	0.7892
12/31/2001	1.62	1.328	0.8198
12/31/2002	1.69	1.34	0.7929
12/31/2003	1.71	1.35	0.7895
12/31/2004	1.77	1.36	0.7684
12/30/2005	1.57	1.37	0.8726
12/29/2006	2.06	1.39	0.6748
12/31/2007	2.27	1.41	0.6211
12/31/2008	2.38	1.43	0.6008
12/31/2009	2.21	1.46	0.6606
12/31/2010	2.5	1.49	0.596
12/30/2011	2.64	1.52	0.5758
			0.8035

NU US Equity			
Date	IS_EPS	EQY_DPS	
12/31/1990	1.94	1.76	0.9072
12/31/1991	2.12	1.76	0.8302
12/31/1992	2.02	1.76	0.8713
12/31/1993	2.02	1.76	0.8713
12/30/1994	2.3	1.76	0.7652
12/29/1995	2.24	1.76	0.7857
12/31/1996	0.01	1.38	138
12/31/1997	-1.01	0.25	
12/31/1998	-1.124	0	
12/31/1999	0.26	0.1	0.3846
12/29/2000	-0.2	0.4	
12/31/2001	1.8	0.45	0.25
12/31/2002	1.18	0.525	0.4449
12/31/2003	0.91	0.575	0.6319
12/31/2004	0.91	0.625	0.6868
12/30/2005	-1.93	0.675	
12/29/2006	3.06	0.725	0.2369
12/31/2007	1.59	0.775	0.4874
12/31/2008	1.68	0.825	0.4911
12/31/2009	1.91	0.95	0.4974
12/31/2010	2.2	1.025	0.4659
12/30/2011	2.22	1.1	0.4955
			0.5646

NST US Equity			
Date	IS_EPS	EQY_DPS	
12/31/1997	1.355	0.94	0.6937
12/31/1998	1.38	0.9475	0.6866
12/31/1999	1.385	1.015	0.7329
12/29/2000	1.595	1.0075	0.6317
12/31/2001	-0.025	1.0375	
12/31/2002	1.525	1.065	0.6984
12/31/2003	1.71	1.0875	0.636
12/31/2004	1.77	1.1225	0.6342
12/30/2005	1.84	0.87	0.4728
12/29/2006	1.94	1.535	0.7912
12/31/2007	2.07	1.325	0.6401
12/31/2008	2.22	1.425	0.6419
12/31/2009	2.37	1.525	0.6435
12/31/2010	3.36	1.625	0.4836
12/30/2011	2.6	1.558	0.5992
			0.641

OGE US Equity				OTTR US Equity				POM US Equity				PCG US Equity			
Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS	
12/31/1990	1.69	1.24	0.7337	12/31/1990	0.995	0.78	0.7839	12/29/2000	3.02	1.66	0.5497	12/31/1990	2.1	1.52	0.7238
12/31/1991	1.635	1.29	0.789	12/31/1991	1.075	0.8	0.7442	12/31/2001	1.51	1.165	0.7715	12/31/1991	2.24	1.64	0.7321
12/31/1992	1.21	1.33	1.0992	12/31/1992	1.085	0.82	0.7558	12/31/2002	1.61	1	0.6211	12/31/1992	2.58	1.76	0.6822
12/31/1993	1.39	1.33	0.9568	12/31/1993	1.115	0.84	0.7534	12/31/2003	0.66	1	1.5152	12/31/1993	2.33	1.88	0.8069
12/30/1994	1.505	1.33	0.8837	12/30/1994	1.17	0.86	0.735	12/31/2004	1.48	1	0.6757	12/30/1994	2.21	1.96	0.8869
12/29/1995	1.525	1.33	0.8721	12/29/1995	1.19	0.88	0.7395	12/30/2005	1.96	1	0.5102	12/29/1995	2.99	1.96	0.6555
12/31/1996	1.625	1.33	0.8185	12/31/1996	1.23	0.9	0.7317	12/29/2006	1.3	1.04	0.8	12/31/1996	1.75	1.77	1.0114
12/31/1997	1.6135	1.33	0.8243	12/31/1997	1.29	0.93	0.7209	12/31/2007	1.72	1.04	0.6047	12/31/1997	1.75	#N/A N/A	
12/31/1998	2.045	1.33	0.6504	12/31/1998	1.36	0.96	0.7059	12/31/2008	1.47	1.08	0.7347	12/31/1998	1.88	1.2	0.6383
12/31/1999	1.94	1.33	0.6856	12/31/1999	1.79	0.99	0.5531	12/31/2009	1.06	1.08	1.0189	12/31/1999	-0.2	1.2	
12/29/2000	1.89	1.33	0.7037	12/29/2000	1.59	1.02	0.6415	12/31/2010	0.14	1.08	7.7143	12/29/2000	-9.29	1.2	
12/31/2001	1.29	1.33	1.031	12/31/2001	1.69	1.04	0.6154	12/30/2011	1.14	1.08	0.9474	12/31/2001	3.03	0	0
12/31/2002	1.16	1.33	1.1466	12/31/2002	1.8	1.06	0.5889					12/31/2002	-2.36	0	
12/31/2003	1.59	1.33	0.8365	12/31/2003	1.52	1.08	0.7105					12/31/2003	1.09	0	0
12/31/2004	1.74	1.33	0.7644	12/31/2004	1.59	1.1	0.6918					12/31/2004	10.8	0.33	0.0306
12/30/2005	2.34	1.33	0.5684	12/30/2005	2.12	1.12	0.5283					12/30/2005	2.4	1.23	0.5125
12/29/2006	2.88	1.3375	0.4644	12/29/2006	1.71	1.15	0.6725					12/29/2006	2.78	1.32	0.4748
12/31/2007	2.66	1.3675	0.5141	12/31/2007	1.79	1.17	0.6536					12/31/2007	2.79	1.44	0.5161
12/31/2008	2.5	1.3975	0.559	12/31/2008	1.09	1.19	1.0917					12/31/2008	3.64	1.56	0.4286
12/31/2009	2.68	1.4275	0.5326	12/31/2009	0.71	1.19	1.6761					12/31/2009	3.25	1.68	0.5169
12/31/2010	3.03	1.4625	0.4827	12/31/2010	-0.06	1.19						12/31/2010	2.86	1.82	0.6364
12/30/2011	3.5	1.5175	0.4336	12/30/2011	-0.4	1.19						12/30/2011	2.1	1.82	0.8667
			0.749				0.7157				0.7531				0.6373

PNW US Equity

Date	IS_EPS	EQY_DPS	
12/31/1990	1.12	#N/A N/A	
12/31/1991	-2.15	#N/A N/A	
12/31/1992	1.8	#N/A N/A	
12/31/1993	2.17	0.2	0.0922
12/30/1994	2.3	0.825	0.3587
12/29/1995	2.15	0.925	0.4302
12/31/1996	2.07	1.025	0.4952
12/31/1997	2.76	1.125	0.4076
12/31/1998	2.87	1.225	0.4268
12/31/1999	1.98	1.325	0.6692
12/29/2000	3.57	1.425	0.3992
12/31/2001	3.68	1.525	0.4144
12/31/2002	1.76	1.625	0.9233
12/31/2003	2.64	1.725	0.6534
12/31/2004	2.66	1.825	0.6861
12/30/2005	1.83	1.925	1.0519
12/29/2006	3.29	2.025	0.6155
12/31/2007	3.06	2.1	0.6863
12/31/2008	2.4	2.1	0.875
12/31/2009	0.68	2.1	3.0882
12/31/2010	3.28	2.1	0.6402
12/30/2011	3.11	2.1	0.6752
			0.6402

PNM US Equity

Date	IS_EPS	EQY_DPS	
12/31/1990	-0.153	#N/A N/A	
12/31/1991	0.2133	#N/A N/A	
12/31/1992	-1.78	#N/A N/A	
12/31/1993	-1.093	#N/A N/A	
12/30/1994	1.18	#N/A N/A	
12/29/1995	1.1467	#N/A N/A	
12/31/1996	1.1467	0.24	0.2093
12/31/1997	1.28	0.42	0.3281
12/31/1998	1.3133	0.5133	0.3908
12/31/1999	1.34	0.5333	0.398
12/29/2000	1.6933	0.5333	0.3149
12/31/2001	2.5533	0.5333	0.2089
12/31/2002	1.0867	0.5733	0.5276
12/31/2003	1.5933	0.6067	0.3808
12/31/2004	1.45	0.63	0.4345
12/30/2005	1.02	0.785	0.7696
12/29/2006	1.73	0.88	0.5087
12/31/2007	0.98	0.92	0.9388
12/31/2008	-3.24	0.605	
12/31/2009	1.36	0.5	0.3676
12/31/2010	-0.49	0.5	
12/30/2011	1.98	0.5	0.2525
			0.3858

POR US Equity

Date	IS_EPS	EQY_DPS	
12/31/1992	2.3	0	0
12/31/1993	2.17	0	0
12/30/1994	2.29	0	0
12/29/1995	1.94	0	0
12/31/1996	3.58	0	0
12/31/1997	2.899	1.47	0.5071
12/31/1998	3.16	1.15	0.3639
12/31/1999	2.95	1.89	0.6407
12/29/2000	3.25	1.89	0.5815
12/31/2001	0.748	0.935	1.25
12/31/2002	1.5	0.63	0.42
12/31/2003	1.33	0	0
12/31/2004	2.15	0	0
12/30/2005	1.5	3.51	2.34
12/29/2006	1.14	0.675	0.5921
12/31/2007	2.33	0.93	0.3991
12/31/2008	1.39	0.97	0.6978
12/31/2009	1.31	1.01	0.771
12/31/2010	1.66	1.035	0.6235
12/30/2011	1.95	1.055	0.541
			0.4635

PPL US Equity

Date	IS_EPS	EQY_DPS	
12/31/1990	0.9875	0.745	0.7544
12/31/1991	1.0025	0.775	0.7731
12/31/1992	1.01	0.8	0.7921
12/31/1993	1.035	0.825	0.7971
12/30/1994	0.705	0.835	1.1844
12/29/1995	1.025	0.835	0.8146
12/31/1996	1.025	0.835	0.8146
12/31/1997	0.9	0.835	0.9278
12/31/1998	-1.73	0.6675	
12/31/1999	1.42	0.5	0.3521
12/29/2000	1.725	0.53	0.3072
12/31/2001	0.615	0.53	0.8618
12/31/2002	0.685	0.72	1.0511
12/31/2003	2.125	0.77	0.3624
12/31/2004	1.89	0.82	0.4339
12/30/2005	1.79	0.96	0.5363
12/29/2006	2.27	1.1	0.4846
12/31/2007	3.39	1.22	0.3599
12/31/2008	2.48	1.34	0.5403
12/31/2009	1.08	1.38	1.2778
12/31/2010	2.17	1.4	0.6452
12/30/2011	2.71	1.4	0.5166
			0.7544

PGN US Equity

Date	IS_EPS	EQY_DPS
12/31/1990	2.18	1.46
12/31/1991	2.265	1.52
12/31/1992	2.36	1.58
12/31/1993	2.1	1.64
12/30/1994	2.03	1.7
12/29/1995	2.48	1.76
12/31/1996	2.66	1.82
12/31/1997	2.66	1.895
12/31/1998	2.75	1.955
12/31/1999	2.56	2.015
12/29/2000	3.04	2.075
12/31/2001	2.65	2.135
12/31/2002	2.43	2.195
12/31/2003	3.3	2.26
12/31/2004	3.13	2.32
12/30/2005	2.82	2.38
12/29/2006	2.28	2.43
12/31/2007	1.97	2.45
12/31/2008	3.17	2.465
12/31/2009	2.71	2.48
12/31/2010	2.95	2.48
12/30/2011	1.94	2.119

	PEG US Equity				SCG US Equity				SRE US Equity			
	Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS	
0.6697	12/31/1990	1.28	1.045	0.8164	12/31/1990	2.22	1.26	0.5676	12/31/1996	1.77	#N/A N/A	
0.6711	12/31/1991	1.215	1.065	0.8765	12/31/1991	1.685	1.31	0.7774	12/31/1997	1.83	1.27	0.694
0.6695	12/31/1992	1.085	1.08	0.9954	12/31/1992	1.42	1.34	0.9437	12/31/1998	1.24	1.56	1.2581
0.781	12/31/1993	1.3	1.08	0.8308	12/31/1993	1.86	1.37	0.7366	12/31/1999	1.66	1.56	0.9398
0.8374	12/30/1994	1.39	1.08	0.777	12/30/1994	1.2185	1.41	1.1572	12/29/2000	2.06	1	0.4854
0.7097	12/29/1995	1.355	1.08	0.797	12/29/1995	1.7	1.44	0.8471	12/31/2001	2.54	1	0.3937
0.6842	12/31/1996	1.26	1.08	0.8571	12/31/1996	2.05	1.47	0.7171	12/31/2002	2.88	1	0.3472
0.7124	12/31/1997	1.205	1.08	0.8963	12/31/1997	2.06	1.51	0.733	12/31/2003	3.07	1	0.3257
0.7109	12/31/1998	1.395	1.08	0.7742	12/31/1998	2.12	1.54	0.7264	12/31/2004	3.92	1	0.2551
0.7871	12/31/1999	-0.185	1.08		12/31/1999	1.73	1.32	0.763	12/30/2005	3.74	1.16	0.3102
0.6826	12/29/2000	1.775	1.08	0.6085	12/29/2000	2.4	1.15	0.4792	12/29/2006	5.48	1.2	0.219
0.8057	12/31/2001	1.85	1.08	0.5838	12/31/2001	5.15	1.2	0.233	12/31/2007	4.24	1.24	0.2925
0.9033	12/31/2002	0.565	1.08	1.9115	12/31/2002	-1.34	1.3		12/31/2008	4.5	1.37	0.3044
0.6848	12/31/2003	2.54	1.08	0.4252	12/31/2003	2.54	1.38	0.5433	12/31/2009	4.6	1.56	0.3391
0.7412	12/31/2004	1.53	1.1	0.719	12/31/2004	2.3	1.46	0.6348	12/31/2010	3.02	1.56	0.5166
0.844	12/30/2005	1.375	1.12	0.8145	12/30/2005	2.81	1.56	0.5552	12/30/2011	5.66	1.92	0.3392
1.0658	12/29/2006	1.47	1.14	0.7755	12/29/2006	2.68	1.68	0.6269				
1.2437	12/31/2007	2.63	0.585	0.2224	12/31/2007	2.74	1.76	0.6423				
0.7776	12/31/2008	2.34	1.29	0.5513	12/31/2008	2.95	1.84	0.6237				
0.9151	12/31/2009	3.15	1.33	0.4222	12/31/2009	2.85	1.88	0.6596				
0.8407	12/31/2010	3.09	1.37	0.4434	12/31/2010	2.99	1.9	0.6355				
1.0923	12/30/2011	2.97	1.37	0.4613	12/30/2011	3.01	1.94	0.6445				
0.7793				0.7755				0.6445				0.3392

NVE US Equity				SO US Equity				TE US Equity				UIL US Equity			
Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS	
12/31/1999	0.83	1.165	1.4036	12/31/1990	0.955	1.07	1.1204	12/31/1990	1.225	0.7975	0.651	12/31/1990	2.13	1.392	0.6535
12/29/2000	-0.51	1		12/31/1991	1.39	1.07	0.7698	12/31/1991	1.275	0.8475	0.6647	12/31/1991	2.202	1.464	0.6649
12/31/2001	0.65	0.65	1	12/31/1992	1.51	1.1	0.7285	12/31/1992	1.3	0.8975	0.6904	12/31/1992	2.256	1.536	0.6809
12/31/2002	-3.01	0.2		12/31/1993	1.57	1.14	0.7261	12/31/1993	1.4	0.9475	0.6768	12/31/1993	1.542	1.596	1.035
12/31/2003	-1.21	0		12/30/1994	1.52	1.18	0.7763	12/30/1994	1.32	0.9975	0.7557	12/30/1994	1.854	1.656	0.8932
12/31/2004	0.16	0	0	12/29/1995	1.66	1.22	0.7349	12/29/1995	1.6	1.0475	0.6547	12/29/1995	2.184	1.692	0.7747
12/30/2005	0.44	0	0	12/31/1996	1.68	1.26	0.75	12/31/1996	1.67	1.105	0.6617	12/31/1996	1.728	1.728	1
12/29/2006	1.33	0	0	12/31/1997	1.419	1.3	0.9161	12/31/1997	1.54	1.165	0.7565	12/31/1997	1.962	1.728	0.8807
12/31/2007	0.89	0.16	0.1798	12/31/1998	1.402	1.34	0.9558	12/31/1998	1.57	1.225	0.7803	12/31/1998	1.92	1.728	0.9
12/31/2008	0.89	0.34	0.382	12/31/1999	1.86	1.34	0.7204	12/31/1999	1.42	1.285	0.9049	12/31/1999	2.226	1.728	0.7763
12/31/2009	0.78	0.41	0.5256	12/29/2000	2.01	1.34	0.6667	12/29/2000	1.99	1.33	0.6683	12/29/2000	2.592	1.728	0.6667
12/31/2010	0.97	0.45	0.4639	12/31/2001	1.83	1.34	0.7322	12/31/2001	2.26	1.38	0.6106	12/31/2001	2.526	1.728	0.6841
12/30/2011	0.69	0.49	0.7101	12/31/2002	1.86	1.355	0.7285	12/31/2002	2.15	1.41	0.6558	12/31/2002	1.854	1.728	0.932
				12/31/2003	2.03	1.385	0.6823	12/31/2003	-5.05	0.925		12/31/2003	0.978	1.728	1.7669
				12/31/2004	2.07	1.415	0.6836	12/31/2004	-2.87	0.76		12/31/2004	3.624	1.728	0.4768
				12/30/2005	2.14	1.475	0.6893	12/30/2005	1.33	0.76	0.5714	12/30/2005	1.29	1.728	1.3395
				12/29/2006	2.12	1.535	0.7241	12/29/2006	1.19	0.76	0.6387	12/29/2006	-2.66	1.728	
				12/31/2007	2.29	1.595	0.6965	12/31/2007	1.98	0.775	0.3914	12/31/2007	1.79	1.728	0.9654
				12/31/2008	2.26	1.6625	0.7356	12/31/2008	0.77	0.795	1.0325	12/31/2008	1.92	1.728	0.9
				12/31/2009	2.07	1.7325	0.837	12/31/2009	1	0.8	0.8	12/31/2009	1.94	1.728	0.8907
				12/31/2010	2.37	1.8025	0.7605	12/31/2010	1.12	0.815	0.7277	12/31/2010	1.53	1.728	1.1294
				12/30/2011	2.57	1.8725	0.7286	12/30/2011	1.27	0.85	0.6693	12/30/2011	1.96	1.728	0.8816
			0.423				0.7304				0.6688				0.8907

UNS US Equity				VVC US Equity				WR US Equity				WEC US Equity				XEL US Equity			
Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS	
12/31/1990	-77.5	0		12/31/1999	1.48	0.94	0.6351	12/31/1990	2.25	1.8	0.8	12/31/1990	0.9233	0.5783	0.6263	12/31/1990	1.415	1.1475	0.811
12/31/1991	-90.5	0		12/29/2000	1.18	0.74	0.6271	12/31/1991	2.41	2.04	0.8465	12/31/1991	0.9367	0.6117	0.653	12/31/1991	1.645	1.1975	0.728
12/31/1992	-19.3	0		12/31/2001	0.79	1.03	1.3038	12/31/1992	2.2	1.9	0.8636	12/31/1992	0.835	0.6425	0.7695	12/31/1992	1.52	1.2475	0.8207
12/31/1993	-0.8	0		12/31/2002	1.69	1.07	0.6331	12/31/1993	2.76	1.94	0.7029	12/31/1993	0.9	0.6706	0.7451	12/31/1993	1.51	1.2825	0.8493
12/30/1994	0.65	0	0	12/31/2003	1.58	1.11	0.7025	12/30/1994	2.82	1.98	0.7021	12/30/1994	0.835	0.6981	0.836	12/30/1994	1.73	1.3125	0.7587
12/29/1995	1.7	0	0	12/31/2004	1.43	1.15	0.8042	12/29/1995	2.71	2.02	0.7454	12/29/1995	1.065	0.7275	0.6831	12/29/1995	1.955	1.3425	0.6867
12/31/1996	3.76	0	0	12/30/2005	1.81	1.19	0.6575	12/31/1996	2.41	2.06	0.8548	12/31/1996	0.985	0.7538	0.7653	12/31/1996	1.91	1.3725	0.7186
12/31/1997	2.6	0	0	12/29/2006	1.44	1.23	0.8542	12/31/1997	7.5943	2.1	0.2765	12/31/1997	0.27	0.3838	1.4215	12/31/1997	1.61	1.4025	0.8711
12/31/1998	0.87	#N/A N/A		12/31/2007	1.89	1.27	0.672	12/31/1998	0.673	2.14	3.1798	12/31/1998	0.825	0.7775	0.9424	12/31/1998	1.84	1.425	0.7745
12/31/1999	2.45	#N/A N/A		12/31/2008	1.65	1.31	0.7939	12/31/1999	0.2	2.14	10.7	12/31/1999	0.895	0.78	0.8715	12/31/1999	1.7	1.445	0.85
12/29/2000	1.29	0.24	0.186	12/31/2009	1.65	1.345	0.8152	12/29/2000	1.96	1.435	0.7321	12/29/2000	0.64	0.685	1.0703	12/29/2000	1.54	1.482	0.9623
12/31/2001	1.84	0.4	0.2174	12/31/2010	1.65	1.365	0.8273	12/31/2001	-0.31	1.2		12/31/2001	0.935	0.4	0.4278	12/31/2001	2.31	1.5	0.6494
12/31/2002	0.99	0.5	0.5051	12/30/2011	1.73	1.385	0.8006	12/31/2002	-11.06	1.2		12/31/2002	0.725	0.4	0.5517	12/31/2002	-5.82	1.125	
12/31/2003	3.33	0.6	0.1802					12/31/2003	1.16	0.76	0.6552	12/31/2003	1.045	0.4	0.3828	12/31/2003	1.55	0.75	0.4839
12/31/2004	1.34	0.64	0.4776					12/31/2004	2.14	0.8	0.3738	12/31/2004	1.3	0.415	0.3192	12/31/2004	0.88	0.81	0.9205
12/30/2005	1.33	0.76	0.5714					12/30/2005	1.55	0.92	0.5935	12/30/2005	1.32	0.44	0.3333	12/30/2005	1.26	0.8525	0.6766
12/29/2006	1.91	0.84	0.4398					12/29/2006	1.88	1	0.5319	12/29/2006	1.35	0.46	0.3407	12/29/2006	1.4	0.8825	0.6304
12/31/2007	1.64	0.9	0.5488					12/31/2007	1.85	1.08	0.5838	12/31/2007	1.435	0.5	0.3484	12/31/2007	1.38	0.91	0.6594
12/31/2008	0.39	0.96	2.4615					12/31/2008	1.7	1.16	0.6824	12/31/2008	1.535	0.54	0.3518	12/31/2008	1.47	0.94	0.6395
12/31/2009	2.91	1.16	0.3986					12/31/2009	1.58	1.2	0.7595	12/31/2009	1.635	0.675	0.4128	12/31/2009	1.48	0.97	0.6554
12/31/2010	3.1	1.56	0.5032					12/31/2010	1.81	1.24	0.6851	12/31/2010	1.955	0.8	0.4092	12/31/2010	1.63	1	0.6135
12/30/2011	2.98	1.68	0.5638					12/30/2011	1.95	1.28	0.6564	12/30/2011	2.26	1.04	0.4602	12/30/2011	1.72	1.03	0.5988
			0.4192				0.7939				0.7025				0.589				0.7186

Start Date	1/1/1980
End Date	3/16/2012

Zero DPS	0.00
Negative EPS	
Errors	

Average Median	69.50%

ATO US Equity				LG US Equity			
Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS	
12/31/1990	0.98	0.7733	0.789082	12/31/1990	1.185	1.18	0.995781
12/31/1991	0.8	0.8	1	12/31/1991	1.28	1.2	0.9375
12/31/1992	0.9733	0.8267	0.849378	12/31/1992	1.165	1.2	1.030043
12/31/1993	1.22	0.8533	0.699426	12/31/1993	1.61	1.215	0.754658
12/30/1994	0.97	0.88	0.907216	12/30/1994	1.42	1.22	0.859155
12/29/1995	1.22	0.92	0.754098	12/29/1995	1.27	1.24	0.976378
12/31/1996	1.42	0.96	0.676056	12/31/1996	1.87	1.26	0.673797
12/31/1997	0.81	1.005	1.240741	12/31/1997	1.84	1.3	0.706522
12/31/1998	1.85	1.06	0.572973	12/31/1998	1.58	1.32	0.835443
12/31/1999	0.58	1.1	1.896552	12/31/1999	1.43	1.34	0.937063
12/29/2000	1.14	1.14	1	12/29/2000	1.37	1.34	0.978102
12/31/2001	1.47	1.16	0.789116	12/31/2001	1.61	1.34	0.832298
12/31/2002	1.45	1.18	0.813793	12/31/2002	1.18	1.34	1.135593
12/31/2003	1.55	1.2	0.774194	12/31/2003	1.82	1.34	0.736264
12/31/2004	1.6	1.22	0.7625	12/31/2004	1.82	1.355	0.744505
12/30/2005	1.73	1.24	0.716763	12/30/2005	1.9	1.375	0.723684
12/29/2006	1.83	1.26	0.688525	12/29/2006	2.31	1.41	0.61039
12/31/2007	1.94	1.28	0.659794	12/31/2007	2.32	1.46	0.62931
12/31/2008	2.02	1.3	0.643564	12/31/2008	3.6	1.5	0.416667
12/31/2009	2.1	1.32	0.628571	12/31/2009	2.93	1.54	0.525597
40543	2.22	1.34		40543	2.43	1.58	
40907	2.28	1.36		40907	2.87	1.62	
			0.768347				0.793478

Source: Bloomberg

NJR US Equity				GAS US Equity				NI US Equity			
Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS	
12/31/1990	0.4311	0.64	1.484574	12/31/1990	1.01	0.98	0.970297	12/31/1990	0.5905	0.52	0.88061
12/31/1991	0.3689	0.6667	1.807265	12/31/1991	1.035	1.02	0.985507	12/31/1991	0.97	0.58	0.597938
12/31/1992	0.7289	0.6756	0.926876	12/31/1992	1.13	1.03	0.911504	12/31/1992	1	0.62	0.62
12/31/1993	0.7644	0.6756	0.88383	12/31/1993	1.08	1.04	0.962963	12/31/1993	1.155	0.66	0.571429
12/30/1994	0.8578	0.6756	0.787596	12/30/1994	1.17	1.04	0.888889	12/30/1994	1.24	0.72	0.580645
12/29/1995	0.6267	0.6756	1.078028	12/29/1995	0.5	0.52	1.04	12/29/1995	1.36	0.78	0.573529
12/31/1996	0.9156	0.6889	0.752403	12/31/1996	1.37	1.06	0.773723	12/31/1996	1.44	0.84	0.583333
12/31/1997	0.9867	0.7111	0.720685	12/31/1997	1.37	1.08	0.788321	12/31/1997	1.54	0.9	0.584416
12/31/1998	1.0444	0.7289	0.697913	12/31/1999	1.3	1.08	0.830769	12/31/1998	1.6	0.96	0.6
12/31/1999	1.1156	0.7467	0.669326	12/29/2000	1.29	1.08	0.837209	12/31/1999	1.29	1.035	0.802326
12/29/2000	1.2267	0.7644	0.623135	12/31/2001	1.63	1.08	0.662577	12/29/2000	1.12	#N/A N/A	
12/31/2001	1.3111	0.7822	0.596598	12/31/2002	1.84	1.08	0.586957	12/31/2001	1.05	1.16	1.104762
12/31/2002	1.4133	0.8	0.566051	12/31/2003	2.03	1.11	0.546798	12/31/2002	1.77	1.16	0.655367
12/31/2003	1.6067	0.8267	0.514533	12/31/2004	2.3	1.15	0.5	12/31/2003	0.33	1.1	3.333333
12/31/2004	1.7333	0.8667	0.500029	12/30/2005	2.5	1.3	0.52	12/31/2004	1.65	0.92	0.557576
12/30/2005	1.8467	0.9067	0.490984	12/29/2006	2.73	1.48	0.542125	12/30/2005	1.13	0.92	0.814159
12/29/2006	5.3067	0.96	0.180903	12/31/2007	2.74	1.64	0.59854	12/29/2006	1.04	0.92	0.884615
12/31/2007	1.56	1.0133	0.649551	12/31/2008	2.85	1.68	0.589474	12/31/2007	1.17	0.92	0.786325
12/31/2008	2.61	1.11	0.425287	12/31/2009	2.89	1.72	0.595156	12/31/2008	0.29	0.92	3.172414
12/31/2009	0.65	1.24	1.907692	12/31/2010	3.02	1.76	0.582781	12/31/2009	0.79	0.92	1.164557
40543	2.84	1.36		12/30/2011	2.14	1.9	0.88785	40543	1.02	0.92	
40907	2.45	1.44						40907	1.06	0.92	
			0.683619				0.773723				0.655367

NWN US Equity				PNY US Equity				SJI US Equity			
Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS		Date	IS_EPS	EQY_DPS	
12/31/1990	1.62	1.1	0.679012	12/31/1990	0.61	0.415	0.680328	12/31/1990	0.6667	0.701	1.051447
12/31/1991	0.6733	1.1267	1.6734	12/31/1991	0.4425	0.435	0.983051	12/31/1991	0.6373	0.7059	1.107642
12/31/1992	0.74	1.1467	1.549595	12/31/1992	0.6975	0.455	0.65233	12/31/1992	0.7892	0.7059	0.89445
12/31/1993	1.74	1.1667	0.670517	12/31/1993	0.725	0.4825	0.665517	12/31/1993	0.795	0.7165	0.901258
12/30/1994	1.6267	1.1733	0.721276	12/30/1994	0.675	0.5125	0.759259	12/30/1994	0.605	0.72	1.190083
12/29/1995	1.6133	1.18	0.73142	12/29/1995	0.725	0.5425	0.748276	12/29/1995	0.825	0.72	0.872727
12/31/1996	1.97	1.2	0.609137	12/31/1996	0.835	0.5725	0.685629	12/31/1996	1.421	0.72	0.506685
12/31/1997	1.78	1.205	0.676966	12/31/1997	0.905	0.6025	0.665746	12/31/1997	0.734	0.72	0.980926
12/31/1998	1.02	1.22	1.196078	12/31/1998	0.99	0.64	0.646465	12/31/1998	0.51	0.72	1.411765
12/31/1999	1.71	1.225	0.716374	12/31/1999	0.94	0.68	0.723404	12/31/1999	0.995	0.72	0.723618
12/29/2000	1.9	1.24	0.652632	12/29/2000	1.015	0.72	0.70936	12/29/2000	1.06	0.73	0.688679
12/31/2001	1.9	1.245	0.655263	12/31/2001	1.015	0.76	0.748768	12/31/2001	1.135	0.74	0.651982
12/31/2002	1.63	1.26	0.773006	12/31/2002	0.95	0.7925	0.834211	12/31/2002	1.205	0.75	0.622407
12/31/2003	1.77	1.27	0.717514	12/31/2003	1.115	0.8225	0.737668	12/31/2003	1.33	0.78	0.586466
12/31/2004	1.87	1.299	0.694652	12/31/2004	1.28	0.8525	0.666016	12/31/2004	1.545	0.82	0.530744
12/30/2005	2.11	1.32	0.625592	12/30/2005	1.32	0.905	0.685606	12/30/2005	1.39	0.86	0.618705
12/29/2006	2.3	1.39	0.604348	12/29/2006	1.28	0.95	0.742188	12/29/2006	2.45	0.92	0.37551
12/31/2007	2.78	1.44	0.517986	12/31/2007	1.41	0.99	0.702128	12/31/2007	2.11	1.01	0.478673
12/31/2008	2.63	1.52	0.577947	12/31/2008	1.5	1.03	0.686667	12/31/2008	2.59	1.11	0.428571
12/31/2009	2.83	1.6	0.565371	12/31/2009	1.68	1.07	0.636905	12/31/2009	1.95	1.22	0.625641
40543	2.73	1.68		40543	1.96	1.11		40543	2.23	1.36	
40907	2.39	1.75		40907	1.58	1.15		40907	2.98	1.5	
			0.677989				0.694397				0.670331

SWX US Equity			
Date	IS_EPS	EQY_DPS	
12/31/1992	0.81	0.7	0.864198
12/31/1993	0.71	0.74	1.042254
12/30/1994	1.22	0.8	0.655738
12/29/1995	-0.66	0.82	
12/31/1996	0.25	0.82	3.28
12/31/1997	0.61	0.82	1.344262
12/31/1998	1.66	0.82	0.493976
12/31/1999	1.28	0.82	0.640625
12/29/2000	1.22	0.82	0.672131
12/31/2001	1.16	0.82	0.706897
12/31/2002	1.33	0.82	0.616541
12/31/2003	1.14	0.82	0.719298
12/31/2004	1.61	0.82	0.509317
12/30/2005	1.15	0.82	0.713043
12/29/2006	2.07	0.82	0.396135
12/31/2007	1.97	0.86	0.436548
12/31/2008	1.4	0.9	0.642857
12/31/2009	1.95	0.95	0.487179
12/31/2010	2.29	1	0.436681
12/30/2011	2.45	1.06	0.432653
			0.642857

UGI US Equity			
Date	IS_EPS	EQY_DPS	
12/31/1992	0.3667	0.4233	1.15435
12/31/1993	0.3133	0.44	1.404405
12/30/1994	0.4667	0.4533	0.971288
12/29/1995	-0.087	0.3483	
12/31/1996	0.3967	0.47	1.184774
12/31/1997	0.5267	0.4767	0.905069
12/31/1998	0.4067	0.4833	1.188345
12/31/1999	0.58	0.49	0.844828
12/29/2000	0.5467	0.5083	0.92976
12/31/2001	0.6933	0.525	0.757248
12/31/2002	0.9133	0.5417	0.593124
12/31/2003	1.17	0.565	0.482906
12/31/2004	1.18	0.585	0.495763
12/30/2005	1.81	0.65	0.359116
12/29/2006	1.67	0.69	0.413174
12/31/2007	1.92	0.723	0.376563
12/31/2008	2.01	0.755	0.375622
12/31/2009	2.38	0.785	0.329832
12/31/2010	2.38	0.9	0.378151
12/30/2011	2.09	1.02	0.488038
			0.593124

WGL US Equity			
Date	IS_EPS	EQY_DPS	
12/31/1990	1.255	1.01	0.804781
12/31/1991	1.14	1.0425	0.914474
12/31/1992	1.265	1.065	0.841897
12/31/1993	1.31	1.085	0.828244
12/30/1994	1.415	1.105	0.780919
12/29/1995	1.45	1.1175	0.77069
12/31/1996	1.85	1.135	0.613514
12/31/1997	1.85	1.17	0.632432
12/31/1998	1.54	1.195	0.775974
12/31/1999	1.47	1.215	0.826531
12/29/2000	1.79	1.235	0.689944
12/31/2001	1.75	1.255	0.717143
12/31/2002	0.81	1.268	1.565432
12/31/2003	2.31	1.278	0.553247
12/31/2004	1.99	1.295	0.650754
12/30/2005	2.13	1.3225	0.620892
12/29/2006	1.8	1.345	0.747222
12/31/2007	2.19	1.365	0.623288
12/31/2008	2.35	1.4075	0.598936
12/31/2009	2.4	1.4575	0.607292
12/31/2010	2.17	1.5	0.691244
12/30/2011	2.29	1.54	0.672489
12/31/2009	0.96	0.5	0.520833
			0.691244

Division 3-23-ELEC/GAS

Request:

Please provide copies of the documents referenced in footnotes 29-35, 37-39, 42-43, and 50 of Mr. Hevert's testimony.

Response:

Please refer to Attachment DIV 3-23-ELEC/GAS for copies of the requested documents cited in Mr. Hevert's testimony.

JUNE 18, 2010

GLOBAL INFRASTRUCTURE FINANCE

MOODY'S
INVESTORS SERVICE

SPECIAL COMMENT

Regulatory Frameworks – Ratings and Credit Quality for Investor-Owned Utilities

Evaluating a Utility's Regulatory Framework

Table of Contents:

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Summary

The framework in which a regulated utility operates is typically one of its most significant credit considerations. The regulatory structure and its general framework is a primary consideration that differentiates the industry from most other corporate sectors.

The characteristics of a utility's regulatory framework represents one of four factors that are considered, within the context of Moody's Regulated Electric and Gas Utilities Rating Methodology, published August 2009, (the Rating Methodology) to determine its rating. This Special Comment discusses our scoring criteria on that first factor.

A key consideration in our analysis is the degree to which a utility's regulator has the ability to independently regulate within the context of its legal, legislative or political environment.

We also examine how developed the utility's regulatory framework is; the decision making track record of its regulators; the utility's business model; and its regulators' openness to alternative rate mechanisms that help assure timely cost recovery.

We also evaluate patterns of regulatory contentiousness, which is often driven by political intervention at some level, in an effort to develop a view toward regulatory bias. This is one of the more challenging aspects to our analysis, since political intervention often occurs quickly and unexpectedly. Ultimately, we look to evaluate how the act of balancing a utility's appropriate cost of service and return on investment with consumer's ability and willingness to pay may change over time. Today's economic turmoil appears to be having some implications for this assessment in selected jurisdictions.

In the U.S., the vast majority of utilities operate within state regulatory frameworks that are reasonably transparent and well developed where regulators generally strive for a fair balance in establishing rates that assure reliable service at a reasonable cost to ratepayers while allowing a utility a fair opportunity to earn a reasonable return. However, assessing this balance is a complex procedure, and frequently involves a subjective assessment on our part. While most utilities in the U.S. score within the Baa range on the regulatory framework factor, indicating relatively solid support from a credit perspective – there are a few notable exceptions.

In our Regulated Electric and Gas Utilities Ratings Methodology, published August 2009, (the Rating Methodology) the importance of regulatory influence is emphasized by the 50% weighting [2] ascribed to various statutory and regulatory provisions when determining a utility's credit quality. Factor 1, Regulatory Framework, the first of four key factors, is ascribed a 25% weighting and considers the general regulatory and political environment under which a utility operates and the overall business position of a utility within that regulatory environment. Factor 2, Ability to Recover Costs and Earn Returns, is also ascribed a 25% weighting and addresses in a more specific manner the ability of an individual utility to recover its costs and earn a fair return on invested capital.

TABLE 1

Regulated Electric and Gas Utility Rating Methodology

KEY RATING FACTORS AND WEIGHTINGS
1. Regulatory Framework – 25%
2. Ability to Recover Costs and Earn Returns – 25%
3. Diversification – 10%
4. Financial Strength and Liquidity – 40%

Factors 1 and 2 are inter-related in numerous ways. For example, whereas Factor 2 evaluates a company's specific success at earning returns and generating adequate, predictable cash flows, possibly as a result of its use of recovery mechanisms, such as those for fuel and purchased power, environmental, renewable or other expenses, Factor 1 considers, among other things, the regulator's demonstrated willingness to authorize a use of enhanced recovery mechanisms and to provide an ability for the company to earn adequate returns. This Special Comment discusses how we calculate a utility's score for Factor 1 - Regulatory Framework. (The current Factor 1 scoring for the operating utilities in our rated universe is shown in Appendix A). These Factor 1 scores provide an indication of our current thinking. The scores are not intended to be static; they continue to be monitored and modified as warranted to reflect changing conditions and circumstances. In addition, when applied within the context of the Rating Methodology framework grid, the scores shown in Appendix A may be further modified by the use of a "strong" or "weak" designation.

What are the characteristics of a utility's regulatory framework?

In evaluating a utility's regulatory framework, we consider such things as the regulatory body's independence; its legislative or political environment; the extent of the regulatory framework's development; its track record for predictable, stable decisions; the utility's business model; and the openness of the regulators to alternative rate mechanisms that tend to provide additional assurance of timely cost recovery and the ability to earn a return on invested capital.

Regulatory Independence

A key consideration in assessing Factor 1 is the degree to which the regulator has the ability to act as an unbiased arbiter over the facts in the record, and base its decisions on the existing laws and statutory decisions. Today, balancing the sometimes conflicting goals of assuring a reliable supply of reasonably priced electricity or natural gas; assuring the long-term financial health of the utilities it regulates; and authorizing rate increases within a given state or region is increasingly viewed as challenging.

[2] The factor weightings shown in the rating methodology grid are approximate. The actual weight given to a factor in our assessment of an issuer's credit quality may differ based on the issuer's circumstances, and the scoring grid does not include every consideration that determines a rating.

www.moodys.com

Rating Methodology

Moody's Global
Infrastructure Finance

August 2009

Regulated Electric and Gas Utilities

Table of Contents:

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(Continued on back page)

Summary

This rating methodology provides guidance on Moody's approach to assigning credit ratings to electric and gas utility companies worldwide whose credit profile is influenced to a large degree by the presence of regulation. It replaces the Global Regulated Electric Utilities methodology published in March 2005 and the North American Regulated Gas Distribution Industry (Local Distribution Companies) methodology published in October 2006. While reflecting similar core principles as these previous methodologies, this updated framework incorporates refinements that better reflect the changing dynamics of the regulated electric and gas industry and the way Moody's applies its industry methodologies.

The goal of this rating methodology is to assist investors, issuers, and other interested parties in understanding how Moody's arrives at company-specific ratings, what factors we consider most important for this sector, and how these factors map to specific rating outcomes. Our objective is for users of this methodology to be able to estimate a company's ratings (senior unsecured ratings for investment-grade issuers and Corporate Family Ratings for speculative-grade issuers) within two alpha-numeric rating notches.

Regulated electric and gas companies are a diverse universe in terms of business model (ranging from vertically integrated to unbundled generation, transmission and/or distribution entities) and regulatory environment (ranging from stable and predictable regulatory regimes to those that are less developed or undergoing significant change). In seeking to differentiate credit risk among the companies in this sector, Moody's analysis focuses on four key rating factors that are central to the assignment of ratings for companies in the sector. The four key rating factors encompass nine specific elements (or sub-factors), each of which map to specific letter ratings (see Appendix A). The four factors are as follows:

1. Regulatory Framework
2. Ability to Recover Costs and Earn Returns
3. Diversification
4. Financial Strength and Liquidity

Moody's Investors Service

For example, an issuer with a composite weighting factor score of 8.2 would have a Baa1 grid-indicated rating. We use a similar procedure to derive the grid-indicated ratings in the tables embedded in the discussion of each of the four broad rating categories.

The Key Rating Factors

Moody's analysis of electric and gas utilities focuses on four broad factors:

1. Regulatory Framework
2. Ability to Recover Costs and Earn Returns
3. Diversification
4. Financial Strength and Liquidity

Rating Factor 1: Regulatory Framework (25%)

Why it Matters

For a regulated utility, the predictability and supportiveness of the regulatory framework in which it operates is a key credit consideration and the one that differentiates the industry from most other corporate sectors. The most direct and obvious way that regulation affects utility credit quality is through the establishment of prices or rates for the electricity, gas and related services provided (revenue requirements) and by determining a return on a utility's investment, or shareholder return. The latter is largely addressed in Factor 2, Ability to Recover Cost and Earn Returns, discussed below. However, in addition to rate setting, there are numerous other less visible or more subtle ways that regulatory decisions can affect a utility's business position. These can include the regulators' ability to pre-approve recovery of investments for new generation, transmission or distribution; to allow the inclusion of generation asset purchases in utility rate bases; to oversee and ultimately approve utility mergers and acquisitions; to approve fuel and purchased power recovery; and to institute or increase ring-fencing provisions.

How We Measure It for the Grid

For a regulated utility company, we consider the characteristics of the regulatory environment in which it operates. These include how developed the regulatory framework is; its track record for predictability and stability in terms of decision making; and the strength of the regulator's authority over utility regulatory issues. A utility operating in a stable, reliable, and highly predictable regulatory environment will be scored higher on this factor than a utility operating in a regulatory environment that exhibits a high degree of uncertainty or unpredictability. Those utilities operating in a less developed regulatory framework or one that is characterized by a high degree of political intervention in the regulatory process will receive the lowest scores on this factor. Consideration is given to the substance of any regulatory ring fencing provisions, including restrictions on dividends; restrictions on capital expenditures and investments; separate financing provisions; separate legal structures; and limits on the ability of the regulated entity to support its parent company in times of financial distress. The criteria for each rating category are outlined in the factor description within the rating grid.

For regulated electric utilities with some unregulated operations, consideration will be given to the competitive and business position of these unregulated operations[3]. Moody's views unregulated operations that have minimal or limited competition, large market shares, and statutorily protected monopoly positions as having substantially less risk than those with smaller market shares or in highly competitive environments. Those businesses with the latter characteristics usually face a higher likelihood of losing customers, revenues, or market share. For electric utilities with a significant amount of such unregulated operations, a lower score could be assigned to this factor than would be if the utility had solely regulated operations.

Moody's views the regulatory risk of U.S. utilities as being higher in most cases than that of utilities located in some other developed countries, including Japan, Australia, and Canada The difference in risk reflects our view that individual state regulation is less predictable than national regulation; a highly fragmented market in the U.S. results in stronger competition in wholesale power markets; U.S. fuel and power markets are more

[3] For diversified gas companies, the "North American Diversified Natural Gas Transmission and Distribution Company" rating methodology is applied.

volatile; there is a low likelihood of extraordinary political action to support a failing company in the U.S.; holding company structures limit regulatory oversight; and overlapping or unclear regulatory jurisdictions characterize the U.S. market. As a result, no U.S. utilities, except for transmission companies subject to federal regulation, score higher than a single A in this factor.

The scores for this factor replace the classifications we had been using to assess a utility's regulatory framework, namely, the Supportiveness of Regulatory Environment (SRE) framework, outlined in our previous rating methodology (Global Regulated Electric Utilities, March 2005), which we are phasing out. Generally speaking, an SRE 1 score from our previous methodology would roughly equate to Aaa or Aa ratings in this methodology; an SRE 2 score to A or high Baa; an SRE 3 score to low Baa or Ba, and an SRE 4 score to a B. For U.S. and Canadian LDCs, this factor corresponds to the "Regulatory Support" and "Ring-fencing" factors in our previous methodology (North American Regulated Gas Distribution, October 2006).

Factor 1 – Regulatory Framework (25%)

Aaa	Aa	A	Baa	Ba	B
Regulatory framework is fully developed, has a long-track record of being predictable and stable, and is highly supportive of utilities. Utility regulatory body is a highly rated sovereign or strong independent regulator with unquestioned authority over utility regulation that is national in scope.	Regulatory framework is fully developed, has been mostly predictable and stable in recent years, and is mostly supportive of utilities. Utility regulatory body is a sovereign, sovereign agency, provincial, or independent regulator with authority over most utility regulation that is national in scope.	Regulatory framework is fully developed, has above average predictability and reliability, although is sometimes less supportive of utilities. Utility regulatory body may be a state commission or national, state, provincial or independent regulator.	Regulatory framework is a) well-developed, with evidence of some inconsistency or unpredictability in the way framework has been applied, or framework is new and untested, but based on well-developed and established precedents, or b) jurisdiction has history of independent and transparent regulation in other sectors. Regulatory environment may sometimes be challenging and politically charged.	Regulatory framework is developed, but there is a high degree of inconsistency or unpredictability in the way the framework has been applied. Regulatory environment is consistently challenging and politically charged. There has been a history of difficult or less supportive regulatory decisions, or regulatory authority has been or may be challenged or eroded by political or legislative action.	Regulatory framework is less developed, is unclear, is undergoing substantial change or has a history of being unpredictable or adverse to utilities. Utility regulatory body lacks a consistent track record or appears unsupportive, uncertain, or highly unpredictable. May be high risk of nationalization or other significant government intervention in utility operations or markets.

Rating Factor 2: Ability to Recover Costs and Earn Returns (25%)

Why It Matters

Unlike Factor 1, which considers the general regulatory framework under which a utility operates and the overall business position of a utility within that regulatory framework, this factor addresses in a more specific manner the ability of an individual utility to recover its costs and earn a return. The ability to recover prudently incurred costs in a timely manner is perhaps the single most important credit consideration for regulated utilities as the lack of timely recovery of such costs has caused financial stress for utilities on several occasions. For example, in four of the six major investor-owned utility bankruptcies in the United States over the last 50 years, regulatory disputes culminated in insufficient or delayed rate relief for the recovery of costs and/or capital investment in utility plant. The reluctance to provide rate relief reflected regulatory commission concerns about the impact of large rate increases on customers as well as debate about the appropriateness of the relief being sought by the utility and views of imprudency. Currently, the utility industry's sizable capital expenditure requirements for infrastructure needs will create a growing and ongoing need for rate relief for recovery of these expenditures at a time when the global economy has slowed.

How We Measure It for the Grid

For regulated utilities, the criteria we consider include the statutory protections that are in place to insure full and timely recovery of prudently incurred costs. In its strongest form, these statutory protections provide unquestioned recovery and preclude any possibility of legal or political challenges to rate increases or cost recovery mechanisms. Historically, there should be little evidence of regulatory disallowances or delays to

Assessing U.S. Vertically Integrated Utilities' Business Risk Drivers

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The methodology that Standard & Poor's Ratings Services uses to rate vertically integrated electric, gas, and combination investor-owned utilities in the U.S. is based on the same precepts that we have used for many years, though the emphasis has changed as the utility industry has evolved. The fundamental methodology encompasses two basic components—business risk and financial risk—and their relationship. Where a utility presents a strong business risk profile, the financial profile can be less robust for any given rating. Likewise, where a utility's business risk profile is weaker, its financial performance must be stronger for any given rating. For combination utilities, the gas operations may have a stabilizing influence on credit quality, but since the electric business is typically significantly larger, it is the major credit driver. *(For details on Standard & Poor's analytical approach to gas utilities, see "Key Credit Factors For Natural Gas Distributors" published Feb. 28, 2006.)*

Often, an integrated utility is a part of a larger holding company structure that also owns other businesses, frequently unregulated electricity generation. This fact does not alter how we analyze the utility, but it may affect the ultimate rating outcome due to any credit drag that the unregulated activities may have on the utility. Such considerations include the freedom and practice of management with respect to shifting cash resources among subsidiaries and the presence of ring-fencing mechanisms that may protect the utility.

Five Factors Determine The Business Profile

Five basic characteristics define a vertically integrated utility's business profile:

- Regulation,
- Markets,
- Operations,
- Competitiveness, and
- Management.

Standard & Poor's is most concerned about how these elements contribute individually

and in aggregate to the predictability and sustainability of financial performance, particularly cash flow generation relative to fixed obligations. While considerable attention has focused in recent years on companies in states that deregulated in the late 1990s and the early part of this decade and the related credit consequences of disaggregation and nonregulated generation, 27 states (plus four that formally reversed, suspended, or delayed restructuring) have retained the traditional regulated model. For utilities operating in those states, the quality of regulation and management looms considerably larger than markets, operations, and competitiveness in shaping overall financial performance. Policies and practices among state and federal regulatory bodies will be key credit determinants. Likewise, the quality of management, defined by its posture towards creditworthiness, strategic decisions, execution and consistency, and its ability to sustain a good working relationship with regulators, will be key. Importantly, however, it is virtually impossible to completely segregate each of these characteristics from the others; to some extent they are all interrelated.

On Standard & Poor's business profile scale (where '1' is excellent and '10' is vulnerable), vertically integrated utilities generally have satisfactory business profiles of '5' or '6'. *(See tables 1 and 2 in the Appendix below for business profile benchmarks plus a list of utilities we rate and their business profile scores.)* We view a company that owns regulated generation, transmission, and distribution operations, as positioned between companies with relatively low-risk transmission and distribution operations and companies with higher-risk diversified activities on the business profile spectrum. What typically distinguishes one vertically integrated utility's business profile score from another is the quality of regulation and management.

Regulation

Regulation is a critical aspect that underlies integrated utilities' creditworthiness. Decisions by state public service commissions can profoundly affect financial performance. Standard & Poor's assessment of the regulatory environments in which a utility operates is guided by certain principles, most prominently consistency and predictability, as well as efficiency and timeliness. For a regulatory scheme to be considered supportive of credit quality, commissions must limit uncertainty in the recovery of a utility's investment. They must also eliminate, or at least greatly reduce, the issue of rate-case lag, especially when a utility engages in a sizable capital expenditure program and incurs substantial deferrals of fuel costs.

Standard & Poor's evaluation encompasses the administrative, judicial, and legislative processes involved in state and federal regulation, and includes the political environment in which commissions render decisions. Regulation is assessed in terms of its ability to satisfy the particular needs of individual utilities. Rate-setting actions are reviewed case-by-case with regard to the potential effect on credit quality. As frequently postulated in prior years, our evaluation of regulation focuses on the willingness and ability of regulation to provide cash flow and earnings quality adequate to meet investment needs, earnings stability through timely recognition of volatile cost components such as fuel and satisfactory returns on invested capital and equity. Regulators' authorization of high rates of return is of little value unless returns are realistic and achievable. Allowing high returns based on noncash items does not benefit bondholders. A regulatory jurisdiction that permits incentives whereby utilities are allowed to earn a return based on their ability to sustain rates at competitive levels is viewed favorably. In addition to performance-based rewards or penalties, flexible plans could include market-based rates, price caps, index-based prices, and rates premised on the value of customer service. Also important is the ability to enter into long-term arrangements at negotiated rates without having to seek regulatory approval for each contract.

Because the bulk of a utility's operating expenses relate to fuel and purchased power, of primary importance to rating stability is the level of support that state regulators provide to utilities for fuel cost recovery, particularly as gas and coal costs have risen. Utilities that

STANDARD &POOR'S

My Credit Profile

Standard & Poor's Updates Its U.S. Utility Regulatory Assessments

Publication date: 12-Mar-2010

Primary Credit Analyst: Todd A Shipman, CFA, New York (1) 212-438-7676;
todd_shipman@standardandpoors.com

In Standard & Poor's Ratings Services' commentary "Assessing U.S. Utility Regulatory Environments," (re-published March 11, 2010 on RatingsDirect), we discussed our views on what constitutes a credit-supportive regulatory climate. We then used those factors to create assessments of the regulatory environments in states that regulate the electric and gas utilities that we rate. We based the assessments of relevant jurisdictions on quantitative and qualitative factors, focusing on four main categories: the basic regulatory paradigm employed in the jurisdiction, ratemaking procedures, political influence, and financial stability.

The table and map below show our updated assessments of regulatory jurisdictions.

We lowered Florida to "Credit-Supportive" from "More Credit-Supportive" to incorporate our opinion regarding what we view to be a higher degree of political influence in more recent regulatory decisions. Connecticut was lowered to "Less Credit-Supportive" from "Credit-Supportive" in response to a series of apparently precedent-setting rate case decisions that, in our opinion, may make it more difficult for utilities to earn a reasonable return. Hawaii was lowered to "Less Credit-Supportive" from "Credit-Supportive" because of worsening regulatory lag and uncertainties we see regarding the realization of the Clean Energy Initiative's goals given the time it is taking to issue key decisions.

We raised Oklahoma to "Credit-Supportive" from "Less Credit-Supportive" based on our assessment of the addition of several new ratemaking mechanisms now used in the state that we believe will significantly enhance rate timeliness and cost recovery. Illinois was raised to "Less Credit-Supportive" from "Least Credit-Supportive" based on what we view as a return to stability in the legislative and regulatory environment after the disruption experienced during the state's transition to competition. We raised Maryland to "Less Credit-Supportive" from "Least Credit-Supportive" for the same reason and what we see as an increased use of credit-friendly rate mechanisms such as decoupling and other adjustment clauses.

Download Table

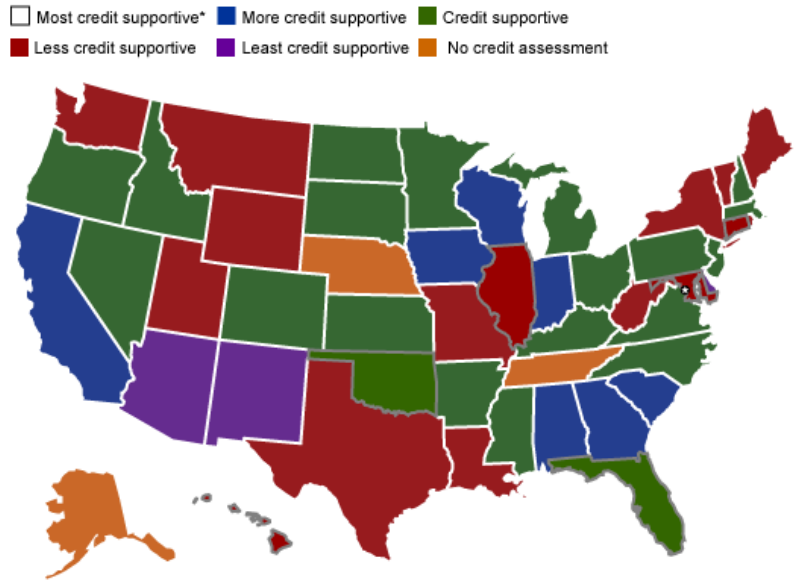
Regulatory Jurisdictions For Utilities Among U.S. States

Most credit supportive	More credit supportive	Credit supportive	Less credit supportive	Least credit supportive
	Alabama	Arkansas	Connecticut¶	Arizona
	California	Colorado	Hawaii¶	Delaware
	Georgia	Florida¶	Illinois*	Dist. of Columbia

	Indiana	Idaho	Louisiana	New Mexico
	Iowa	Kansas	Maine	
	South Carolina	Kentucky	Maryland*	
	Wisconsin	Massachusetts	Missouri	
		Michigan	Montana	
		Minnesota	New York	
		Mississippi	Rhode Island	
		Nevada	Texas	
		New Hampshire	Utah	
		New Jersey	Vermont	
		North Carolina	Washington	
		North Dakota	West Virginia	
		Ohio	Wyoming	
		Oklahoma*		
		Oregon		
		Pennsylvania		
		South Dakota		
		Virginia		

*Assessment raised. ¶Assessment lowered.

Utility Regulatory Conditions Across 50 U.S. States



*The assessments are made against an absolute standard of the degree of credit support. At this time, we observe no U.S. jurisdictions that qualify in the top category. States outlined in gray have changed their regulatory condition since last surveyed.

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Regulatory Research Associates

REGULATORY FOCUS

July 11, 2011

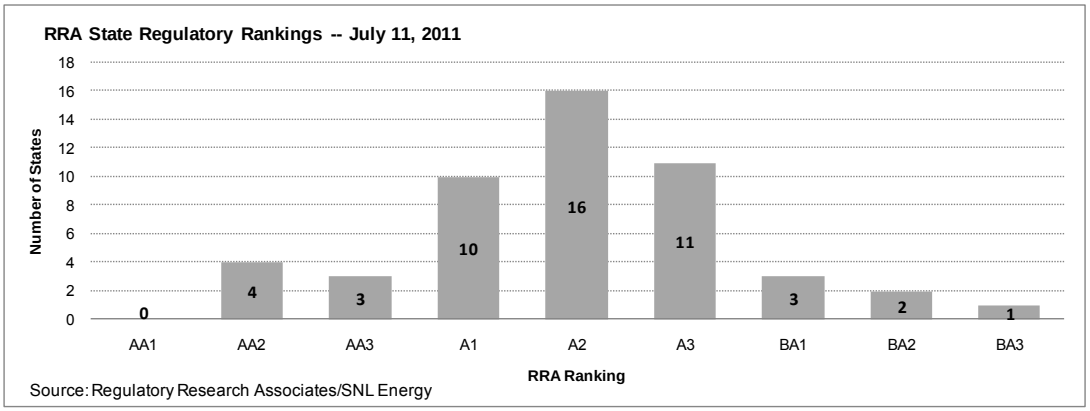
STATE REGULATORY EVALUATIONS

~ Including an Overview of RRA's ranking process ~

As part of RRA's regulatory research effort, we evaluate the regulatory climates of 49 states and the District of Columbia on an ongoing basis. The evaluations are assigned from an investor perspective and indicate the relative regulatory risk associated with the ownership of securities issued by each jurisdiction's electric and gas utilities. Each evaluation is based upon our consideration of the numerous factors affecting the regulatory process in the state, and is changed as major events occur that cause us to modify our view of the regulatory risk accruing to the ownership of utility securities in that individual jurisdiction.

We also review our evaluation when we update our Commission Profiles, and when we publish this quarterly comparative evaluations report. The majority of factors that we consider are discussed in Focus Notes, Commission Profiles, or Final Reports. We also consider information obtained from contacts with commission, company, and government personnel in the course of our research. The final evaluation reflects our assessment of the probable level and quality of the earnings to be realized by the state's utilities as a result of regulatory, legislative, and court actions.

RRA maintains three principal rating categories, Above Average, Average, and Below Average, with Above Average indicating a relatively more constructive, lower-risk regulatory environment from an investor viewpoint, and Below Average indicating a less constructive, higher-risk regulatory climate from an investor viewpoint. Within the three principal rating categories, the numbers 1, 2, and 3 indicate relative position. The designation 1 indicates a stronger (more constructive) rating; 2, a mid-range rating; and, 3, a weaker (less constructive) rating. We endeavor to maintain an approximately equal number of ratings above the average and below the average. The graph below depicts the current distribution of our rankings. (***A more detailed explanation of our ratings process can be found in the Appendix that begins on page 3***.)



Our previous "State Regulatory Evaluations" report was published April 13, 2011, at which time we noted one rating change. In light of a more restrictive posture on the part of the Massachusetts Department of Public Utilities, on April 13, 2011, as indicated in our Massachusetts Commission Profile, we lowered our rating of that jurisdiction to Average/2 from Average/1.

We have made no additional rating changes since our last report, but certain developments in two jurisdictions bear additional comment. In Connecticut, legislation has been enacted that effective July 1, terminated the Connecticut Department of Public Utility Control and established a new agency, the Public Utilities Regulatory Authority, to oversee utility rates. Despite significant structural changes resulting from the reorganization, we do not expect regulatory policies in the state to change dramatically, and, therefore, we are maintaining our Below Average/3 rating of that jurisdiction (see the Connecticut Commission Profile). In addition, in Indiana, uncertainty persists with respect to certain pending proceedings for Duke Energy subsidiary Duke Energy Indiana in the wake of allegations of ethics violations. Although this matter was precipitated by actions taken by Duke, there is the potential for a tightening of the state's regulatory climate for all of the utilities going forward. For the time being, we continue to accord Indiana regulation an Above Average/3 ranking (see the Indiana Commission Profile.)

Above Average	Average	Below Average
1	**1**	**1**
	California	Montana
	Delaware	New Mexico
	Florida	Texas
	Georgia	
	Kentucky	
	Michigan	
	North Dakota	
	Ohio	
	South Carolina	
	Tennessee	
2	**2**	**2**
Alabama	Colorado	Illinois
Mississippi	District of Columbia	Maryland
North Carolina	Hawaii	
Wisconsin	Idaho	
	Kansas	
	Louisiana	
	Maine	
	Massachusetts	
	Minnesota	
	Missouri	
	Nebraska	
	Nevada	
	New Jersey	
	South Dakota	
	Utah	
	Wyoming	
3	**3**	**3**
Indiana	Arizona	Connecticut
Iowa	Arkansas	
Virginia	New Hampshire	
	New York	
	Oklahoma	
	Oregon	
	Pennsylvania	
	Rhode Island	
	Vermont	
	Washington	
	West Virginia	

ALPHABETICAL LISTING

Alabama - AA/2	Indiana - AA/3	Nebraska – A/2	Rhode Island - A/3
Arizona - A/3	Iowa - AA/3	Nevada – A/2	South Carolina - A/1
Arkansas –A/3	Kansas – A/2	New Hampshire – A/3	South Dakota - A/2
California – A/1	Kentucky - A/1	New Jersey - A/2	Tennessee - A/1
Colorado - A/2	Louisiana – A/2	New Mexico - BA/1	Texas - BA/1
Connecticut – BA/3	Maine - A/2	New York – A/3	Utah - A/2
Delaware - A/1	Maryland – BA/2	North Carolina - AA/2	Vermont - A/3
Dist. of Col. - A/2	Massachusetts – A/2	North Dakota - A/1	Virginia - AA/3
Florida - A/1	Michigan - A/1	Ohio - A/1	Washington - A/3
Georgia - A/1	Minnesota - A/2	Oklahoma - A/3	West Virginia – A/3
Hawaii - A/2	Mississippi - AA/2	Oregon - A/3	Wisconsin - AA/2
Idaho - A/2	Missouri - A/2	Pennsylvania - A/3	Wyoming - A/2
Illinois - BA/2	Montana - BA/1		

SNL SNLFinancial

Rhode Island Public Utilities Commission

General Information

Contact information	89 Jefferson Boulevard Warwick, RI 02888 (401) 941-4500 http://www.ripuc.state.ri.us/
No. of Commissioners	3 of 3
Method of Selection	Commissioners: Gubernatorial appointment, Senate confirmation Chairperson: Gubernatorial appointment
Term of Office	Commissioners: 6 years Chairperson: 6 years
Chairperson	Elia Germani
Governor	Lincoln Chafee (I)
Services Regulated	Electric utilities, Gas utilities, Railroad companies, Sewer utilities, Telecommunications utilities, Water carriers, Water utilities
RRA Ranking	Average/3 (5/25/2010)
Commission Budget	$2.6 million
Commissioner Salaries	Commissioners: $89,000 - $110,000 Chairperson: $89,000 - $110,000
Size of Staff	9
Rate Cases	Rhode Island Public Utilities Commission's Rate Case History
Research Notes	RRA Articles
RRA Contact	Lisa Fontanella

Commissioners

Name	Party	Began Serving	Term Ends
Elia Germani **Chairman**	I	05/2000	03/2013
Paul J. Roberti	I	06/2009	03/2015
Mary E. Bray	D	08/2005	03/2011

Miscellaneous Issues

Commissioner Selection: Minority party representation is not required. The chairman is designated by the governor for duration of term as commissioner.

Commission Membership: Commissioner Bray is serving beyond the end of a term that expired in March 2011.

Services Regulated: In addition to electric, gas, telephone, and water utilities, the PUC also regulates: a sewer authority; intrastate water carriers; and, railroad crossings.

Commission Contacts: Luly E. Massaro, Commission Clerk (401) 780-2107

(Section updated 10/14/11)

RRA Evaluation

While the overall regulatory climate in Rhode Island has historically been relatively balanced from an investor vantage point, recent rate-related rulings from the PUC have been somewhat negative. In an electric rate proceeding concluded in 2010, the PUC adopted a 9.8% equity return, by far, the lowest return authorized by the Commission for energy utilities, and significantly below the average of returns authorized for electric utilities nationwide during the preceding 12 months. With respect to electric restructuring, the state's electric distribution utility has retained the provider-of-last-resort responsibility for power supply, and is insulated from market-price fluctuations. While the PUC has recently authorized the utilities to implement revenue decoupling mechanisms, such approvals only came after a legislative mandate. The law also allows for annual adjustments outside a base rate case to reflect incremental capital investment for electric and gas operations, as well as expenses associated with safety and reliability. An alternative regulation plan is in effect for the gas operations of Narragansett Electric that provides for graduated earnings sharing above the benchmark returns. The PUC has approved a gas adjustment clause mechanism that reflects a variety of costs, including system balancing, low-income assistance, demand-side management, and environment response. We accord Rhode Island regulation an Average/3 rating. (Section updated 10/14/11)

RRA Ranking History

Date of Ranking Change	RRA Ranking
5/25/2010	Average / 3
7/16/1997	Average / 2
5/2/1997	Average / 3
5/24/1989	Below Average / 1

RRA maintains three principal rating categories for regulatory climates: Above Average, Average, and Below Average. Within the principal rating categories, the numbers 1, 2, and 3 indicate relative position. The designation 1 indicates a stronger rating; 2, a mid-range rating; and, 3, a weaker rating. The evaluations are assigned from an investor perspective and indicate the relative regulatory risk associated with the ownership of securities issued by the jurisdiction's utilities. The evaluation reflects our assessment of the probable level and quality of the earnings to be realized by the state's utilities as a result of regulatory, legislative, and court actions.

4/4/1984	Below Average / 2
7/13/1982	Below Average / 1
7/2/1982	Below Average / 2

Consumer Interest

Represented by the Division of Public Utilities and Carriers (DPUC), which has roughly 35 employees, and the Department of the Attorney General. The DPUC has a budget of roughly $5.4 million. The DPUC Administrator is appointed by the governor, with the advice and consent of the Senate, for a six-year term. The current administrator is Thomas Ahern, who is serving a third six-year term extending to March 2015. The Division also has jurisdictional authority over intrastate common carriers of property and passengers, cable TV, and mergers and acquisitions. (Section updated 10/14/11)

Rate Case Timing/Interim Procedures

The PUC must suspend rate increase applications within 30 days of the date of filing, or the proposed rates become effective. The maximum suspension period is eight months. The PUC must issue a final order in a rate case within 90 days of the end of hearings. Decisions in fully contested cases for the state's major utilities are generally issued at the end of the full suspension period, or about nine months after the initial filing. The PUC has the statutory authority to permit interim increases, subject to refund, but interim rate increases have seldom been requested. (Section updated 10/14/11)

Return on Equity

Historically, PUC return on equity (ROE) authorizations approximated industry averages when established. However, in the PUC's most recent rate case, decided in 2010, the Commission adopted a 9.8% ROE for Narragansett Electric's (NE's) electric operations (Final Report 5/25/10); this ROE authorization was significantly below the average of returns authorized for energy utilities nationwide during the prior 12 months. In 2008, the PUC authorized NE a 10.5% equity return for its gas operations (Final Report 2/10/09). The PUC also adopted an earnings sharing mechanism (see the Alternative Regulation section). NE, d/b/a National Grid, is a subsidiary of National Grid Group, plc. We note that through a series of mergers, NE is now the only investor-owned energy utility operating in the state (see the Merger Activity section). (Section updated 10/14/11)

Rate Base and Test Period

The PUC has traditionally relied upon an average original-cost rate base for a historical test period adjusted for "known and measurable" changes based upon a forward-looking "rate year," i.e. the first year the new rates would be in effect. For electric utilities, the PUC does not permit construction work in progress to be included in rate base. (Section updated 10/14/11)

Alternative Regulation

From 2004 through Dec. 31, 2009, Narragansett Electric (NE) operated under a rate plan, whereby electric distribution rates were largely frozen, but were subject to adjustments for certain exogenous factors. Earnings between a 10.5% and 11.5% ROE were to be shared equally with ratepayers, and earnings above an 11.5% ROE were to be allocated 75% to ratepayers and 25% to shareholders. A service quality plan was in effect during the rate-freeze, with potential financial penalties of as much as $2.2 million annually.

As part of a rate case decision issued in 2008, the PUC adopted an earnings sharing mechanism (ESM) for NE's gas operations. Under the ESM, NE is to share equally with ratepayers all earnings between a 10.5% and 11.5% ROE. Incremental earnings above an 11.5% ROE are to be shared 75%/25% by ratepayers and shareholders (Final Report 2/10/09). NE is to flow through to ratepayers all non-firm gas margins earned in excess of $2.8 million. The company recovers any shortfall of non-firm margins below $2.8 million through a distribution adjustment clause. Under a merger-related provision, NE was permitted to retain $2 million of annual net merger related savings until July 1, 2010.

Legislation enacted in 2009 requires electric distribution companies to enter into long-term contracts with renewable energy facilities and also provides for electric distribution utilities to receive an incentive payment from customers equal to 2.75% of the annual contract payments to the renewable energy suppliers (see the Renewable Energy section). (Section updated 10/14/11)

Court Actions

PUC decisions may be appealed to the Rhode Island Supreme Court (SC). Supreme Court justices are selected by the governor from a list submitted by an independent commission and are confirmed by the Rhode Island General Assembly. In April 2010, Narragansett Electric (NE) filed an appeal with the SC requesting that the Court review the PUC's April 2010 rate order (Section updated 10/14/11)

Legislation

The Rhode Island General Assembly, a bicameral body, convenes annually on the first Tuesday each January. Currently, there are 65 Democrats and 10 Republicans in the House of Representatives, and 29 Democrats, 8 Republicans, and 1 independent in the Senate.

In 2010, legislation was enacted (S.B. 2841) mandating the utilization of revenue decoupling mechanisms for electric and gas operations (see the Adjustment Clauses section). The law also calls for the annual recovery of capital investments for electric and gas operations as well as expenses associated with system inspection and maintaining safety and reliability of the electric system. Also, in 2010, S.B. 2842 was enacted requiring Narragansett Electric (NE) to enter into a 20-year purchased power agreement with a landfill gas plant, as was S.B. 2819 (and companion H.B. 8083) to facilitate the construction of an offshore wind farm (see the Renewable Energy section). Appropriations-related legislation enacted in 2010 repealed a 2002 law that would have provided for the expansion of the PUC membership to five from three. We note, however, that due to budgetary constraints following the enactment of the 2002 law, the governor had been precluded from appointing two new commissioners. No major utility-related legislation was enacted in the 2011 session. (Section updated 10/14/11)

Merger Activity

The Rhode Island Division of Public Utilities and Carriers (DPUC), rather than the PUC, has authority over mergers in Rhode Island. With respect to mergers and acquisitions, state statutes specify that the DPUC must find that the transaction is "consistent with the public interest and…will not diminish the facilities of the companies used for furnishing service to the public." In 2000, the DPUC approved the proposed merger of New England Electric System (NEES) and Eastern Utilities Associates (EUA), and the PUC subsequently approved a rate plan for then-NEES subsidiary Narragansett Electric (NE), and EUA subsidiaries Blackstone Valley Electric (BVE) and Newport Electric, following a settlement. As part of the rate plan, BVE and Newport were merged into Narragansett Electric (NE), and the rates of the three companies were consolidated. Under the settlement and PUC order, following an initial reduction, rates were frozen through Dec. 31, 2004, and the merged companies operated under an earnings sharing mechanism that extended to

Dec. 31, 2009 (see the Alternative Regulation section). In 2000, NEES' merger with National Grid Group was completed, and NEES' name was changed to National Grid USA (NG-USA). NG USA and EUA subsequently merged as well. NG-USA's Rhode Island operating utility remained Narragansett Electric (NE).

Also in 2000, the DPUC approved Southern Union Gas' (SUG's) proposed acquisitions of Providence Gas (PG) parent Providence Energy Corporation (PEC) and Valley Resources (VR) following a settlement. The parties agreed to forego recovery of an acquisition premium in future rate cases. The related transaction and integration costs were to be recovered only through demonstrated merger related savings. The acquisitions closed in September 2000, and PG and VR became New England Gas (NEG), a subsidiary of SUG. In 2006, the DPUC approved NE's proposal to purchase NEG from SUG. The DPUC found the transition to be in the public and ratepayer interest and that it would not adversely impact electric and gas distribution services in the state. The sale closed in August 2006. (Section updated 10/14/11)

Electric Regulatory Reform/Industry Restructuring

Full retail access commenced in 1998 in accordance with 1996 legislation. As required by the law, each electric distribution company contracted with wholesale suppliers for power to serve standard offer service (SOS) customers at a stipulated rate through 2009. The wholesale supply contracts provided for increases in the per-KWH-rate in the event fuel prices increased above certain levels.

Legislation enacted in 2006 extended the availability of SOS through 2020. Beginning in 2010, SOS prices for large customers are set every three months. The prices for small customers are set every six months.

Under the current operation of SOS, to the extent that the total cost of the utility's wholesale supply, including fuel charges, exceeds retail SOS and last-resort service revenues, the shortfall is recoverable from customers through an a semi-annual standard-offer-adjustment provision. A non bypassable transition charge for the recovery of stranded costs is to be collected from all distribution customers through Dec. 31, 2029. Aggregate transition charges were offset by any above-book proceeds from the sale of generating assets. While the law required the investor-owned utilities to spin-off or sell 15% of their generating assets in order to estimate market value, New England Electric System and Eastern Utilities Associates divested 100% of their generating assets as part of their restructuring plans. The two entities have since merged and are both part of National Grid-USA, whose operating utility is Narragansett Electric. (Section updated 10/14/11)

Gas Regulatory Reform/Industry Restructuring

Since 1996, gas supplier choice has been available to industrial and commercial customers of Narragansett Electric under a program referred to as "Business Choice." The program was later expanded, and now offers supplier-choice to medium and large-volume commercial and industrial customers. (Section updated 10/14/11)

Securitization

By law, the investor-owned utilities may request PUC approval to securitize all, or portions of, any contract termination fees paid to wholesale power suppliers. Any savings associated with such bonds are required to flow to utility customers. However, no securitization applications have been filed. (Section updated 10/14/11)

Adjustment Clauses

Prior to the implementation of electric industry restructuring in 1998, automatic electric fuel adjustment clauses were utilized by the utilities. In accordance with the restructuring law and PUC-approved restructuring plans, investor-owned utilities are to provide standard offer service to customers who do not select an alternative provider through 2020. The cost of providing this service is fully recoverable, with such recovery generally sought on a periodic basis.

In July 2011, pursuant to legislation enacted in May 2010, the PUC approved revenue decoupling mechanisms for Narragansett Electric's (NE's) electric and gas operations. We note that prior to the enactment of the legislation, the PUC had rejected decoupling mechanisms proposed by NE. The May 2010 law also provides for annual recovery of capital investment for electric and gas operations, as well as expenses associated with an inspection and maintenance program and vegetation management program. Under the law, NE submits for PUC approval, annual infrastructure spending plans for its electric and gas operations. The revenue requirements associated with this plans are reflected in rates on a prospective basis, subject to actual capital investment and expense activities.

NE recovers electric commodity-related uncollectibles, including associated administrative costs, through its standard offer service rate. In addition, the company recovers transmission-related bad debt through a transmission-related uncollectible mechanism.

The PUC utilizes an annual, semi-automatic gas cost recovery (GCR) clause for NE. The GCR establishes a deferred gas cost account that reconciles any over- or under-recoveries of gas costs in a later period. The PUC also utilizes an annual distribution adjustment clause (DAC) for NE's gas operations to recover costs associated with system balancing, low-income-assistance programs, demand-side management, and environmental response. Credits associated with margins from non-firm sales and transportation, earnings sharing, weather normalization, and service quality adjustments also flow through the DAC. NE operated under a weather normalization clause, through which the company was required to return to gas customers the margin impact of weather that is 2% colder than normal, and was permitted to recover the margin impact of weather that is greater than 2% warmer than normal. As a result of the legislatively-mandated revenue decoupling mechanism, NE's weather normalization adjustment mechanism ceased to exist as of April 1, 2011, as revenues under the decoupling mechanism are adjusted for variances regardless of cause. (Section updated 10/14/11)

Integrated Resource Planning

With the advent of retail competition, the PUC's previously existing integrated resource planning framework was rescinded. However, legislation enacted in 2006 requires, among other things: (1) the establishment of a least-cost-procurement framework for electric standard offer service (SOS) and a demand-side management program for natural gas; (2) implementation of programs to encourage electric fuel diversity, distributed generation, and demand reduction; and, (3) the development of renewable energy resources. PUC least-cost procurement standards require electric distribution companies to submit triennially, beginning Sept. 1, 2008 through Sept. 1, 2017, plans for system reliability and energy efficiency and conservation procurement.

Under the SOS least-cost procurement framework, NE is required to file annual SOS procurement plans outlining the proposed procurement schedule, pricing options being sought, and proposed term of service for which SOS will be acquired. The procurement plan is subject to PUC review. Electric utilities are also required to submit annual renewable energy supply procurement plans. In accordance with legislation enacted in 2008, electric distribution utilities are permitted to own up to 15 MW of solar and wind projects. (Section updated 10/14/11)

Under Rhode Island's renewable energy portfolio statute enacted in 2004, all retail electric suppliers operating in the state are required to obtain at least 16% of their retail electric sales volumes from renewable resources (e.g., generation units using direct solar radiation, wind, movement or the latent heat of the ocean, geothermal, small hydro facilities, biomass facilities, fuel cells using renewable resources, and waste-to-energy combustion) by year end 2019. Specifically, beginning in 2007, electric providers were required to obtain at least 3% of the electricity they sold to end-use customers from eligible renewable energy resources. The percentage increased by 0.5% per year from 2008 through 2010, and is to rise by an additional 1% per year from 2011 through 2014, and finally by an additional 1.5% per year from 2015 through 2019, thereby reaching 16%. In 2020 and thereafter, the electric providers are required to maintain the 16% minimum requirement, unless the PUC determines that this level is no longer appropriate. The energy utilities may also comply with the standard by purchasing renewable energy certificates or by making payments to the Renewable Energy Development Fund. Narragansett Electric (NE) is required to submit annual renewable energy procurement plans (see the Integrated Resource Planning section).

Legislation enacted in 2008, House Bill 7809, allows electric distribution utilities to own up to 15 MW of solar or wind facilities.

Separately from the utilities' renewable resource standard, legislation enacted in 2009 (and later amended) requires electric utilities to enter into long-term contracts with terms of 10 to 15 years for capacity, energy and attributes from new (i.e., not yet in operation) renewable energy facilities. The utilities must contract for 90 MW of capacity, of which at least 3 MW must be solar. The distribution companies will have four years to enter into such contracts, which are subject to PUC approval, and must adhere to the following timetable: 22.5 MW contracted by Dec. 30, 2010; 45 MW contracted by Dec. 30, 2011; 67.5 MW contracted by Dec. 30, 2012; and, 90 MW contracted by Dec. 30, 2013. A law enacted in 2010 requires NE to enter into a long-term contract for a "utility-scale offshore wind farm" of up to 150 MW. NE may receive an incentive payment equal to 2.75% of the annual contract payments from each renewable energy contract.

Legislation enacted in 2010 required NE to enter into a 20-year purchased power contract with a landfill gas plant. The PUC has adopted rules for long-term contracting standards for renewable energy (Section updated 10/14/11)

The record on small companies: A review of the evidence
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The record on small companies: A review of the evidence

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Abstract It is now exactly 20 years since the publication of the two pioneering papers — Banz, R. (1981) 'The Relationship between Return and Market Value of Common Stock', *Journal of Financial Economics*, 9, 3–18, and Reinganum, M. (1981) 'Misspecification of Capital Asset Pricing: Empirical Anomalies Based on Earnings' Yields and Market Values', *Journal of Financial Economics*, 9, 19–46 — on the performance of small capitalisation companies. The discovery of the so-called 'small size effect' generated a lively debate on market efficiency and asset pricing and led to a considerable amount of further research that shed light on the nature and market behaviour of this important asset class. The purpose of this paper is to review the empirical evidence on small companies with particular emphasis on the implications relevant to practising fund managers. The weight of the evidence suggests that conventional risk measures (betas) fail to reflect the inherent risks of small firms. Such firms are, however, riskier in terms of higher mortality, lower liquidity, higher short-term borrowings and higher volatility of earnings. The evidence also suggests that the outperformance of small cap stocks, even at the pinnacle of its manifestation, was driven by a relatively limited number of such stocks. Such good performers possess a number of key characteristics. They have lower than average market-to-book and price-earnings ratings, and their market value is higher than the average capitalisation of the small cap sector; they have been listed in the market for longer than a year and have not raised additional equity capital in the last year. They have reasonably stable earnings growth profile, do not belong to sectors with excessive swings in analyst forecasts and current ratings do not depend on hugely over-optimistic analyst forecasts.

Keywords: *performance; size effect; small companies*

Introduction

Small cap stocks, in terms of market value, have a long-established tradition in the investment community as an important and distinct asset class. They have always attracted the following of expert analysts and have formed the basis of specialist funds. Interest in small firms exploded in the early 1980s, when a series of academic papers documented a significant long-run return differential between large and small capitalisation stocks. Small companies continue to attract wide investment interest in spite

of their dramatic performance reversal in recent years. Although they make up only a small proportion of the total market capitalisation, in terms of numbers they constitute a large and vital segment of the market.

From the academic viewpoint, the evidence on small cap outperformance provided a direct challenge to the broad concept of market efficiency and conventional asset pricing models. At the beginning, the bulk of the research endeavour was to document the 'anomaly' and test its robustness under various methodologies and independent datasets. This effort has provided considerable insights into some aspects of small firms' behaviour, and in the process discovered a number of other intriguing empirical irregularities.[1] Nevertheless, it is fair to say that, after almost 20 years of its discovery, the underlying logic and sometimes the practical significance[2] of the so-called 'size effect' still remains a matter of debate. We have, however, gained considerable insights into the pricing of financial assets, the operating characteristics of small companies and the special risk characteristics of such firms. It could be argued that the discovery of the small size effect represents a turning point in the direction of academic thinking on asset pricing.

The purpose of this paper is to review the empirical evidence on small companies. It aims to establish the key facts about the characteristics of this asset class rather than to rehearse old explanations for the small size effect.[3] More specifically, this paper's emphasis is on aspects of small companies' behaviour that appear well substantiated by empirical evidence and have practical implications to practising fund managers. Although the review is based on both the USA and the UK evidence, the emphasis is inevitably on the latter. Given the paucity of studies for the London market, it relies heavily on the author's own published and previously unpublished research.

The performance of small caps

Since the initial discovery of the size effect in the USA by Banz (1981) and Reinganum (1981), a stream of other studies documented broadly similar results for a number of other countries as well. Hawawini and Keim (1999) provide a comprehensive review of the international evidence. Levis (1985) published the first detailed study on the performance of small companies for the London market. The study documents an average 6.5 per cent annual raw premium for the smaller decile of UK firms during the period January 1958 to December 1982; it is based on a sample ranging from around 1,500 in the late 1950s to 2,400 in the mid-1970s. In line with the US evidence, the size premium is consistent across the whole spectrum of market size deciles, suggesting that a significant, albeit lower, size premium could be achieved at levels of market capitalisation more amenable to fund managers' requirements.

This study attracted considerable media[4] attention which eventually led to the 1987 launch of the Hoare Govett Smaller Companies (HGSC), the Hoare Govett 1000 (HG1000) and the FTSE Small Companies indices. The HGSC index is value weighted and defines small companies as the bottom 10 per cent of the London market according to market capitalisation. The index is broadly equivalent to the weighted average of the first nine deciles classification in the Levis (1995) study. It covers an average of about 1,600 companies with a maximum market capitalisation of about £500m. At the same time, the largest company in the HG 1000 index is usually about £100m. The definition of

a small firm has also shifted in recent years. A survey reveals that 63 per cent of investment managers now include businesses with a market capitalisation of more than £350m in their definition of a small company; the proportion of fund managers taking this view has doubled during the past year.[5]

The HGSC index shows a premium of 6.3 per cent over the FTSE All Share for the period 1955–88 but it records a dramatic reversal of small companies' performance in more recent years. Thus, the average return differential for the period 1955–2000 has declined to a mere 3.6 per cent per annum. The turning point for small companies' performance in the UK appears to be in the third quarter of 1988. Before then, small companies enjoyed six consecutive years of strong outperformance. With the exception of the 1957–64 period, this was indeed the longest spell of small company supremacy. Sometimes it is argued that the small company premium disappeared, both in the USA and in the UK, as soon as it became widely publicised. This is a far-fetched interpretation of causality. It is important to note that, at the time of the size effect reversal, the UK economy was undergoing some significant changes. For the record, four key developments can be noted. First, the FTA index lost 5.24 per cent of its value during the single month of August 1988. Secondly, this same month was the first time for a long period that the market witnessed an inverted term structure in interest rates. Treasury bill rates increased from 6.9 per cent in May 1988 to 10.9 in August 1988. Thirdly, in the 12 months to August 1988, the sterling rate strengthened by 6.8 per cent against a basket of main currencies. Fourthly, the CBI business confidence indicator dropped by 67 per cent in the 12 months to August 1988, starting a period of prolonged deterioration in business confidence across the UK manufacturing industry.

The international evidence

The size effect has also ceased to exist in the US markets since the mid-1980s. In fact, Siegel (1994) claims that the entire outperformance by small cap stocks from the end of 1926 to 1996 is due to the nine-year period from 1975 through 1983. More recently, Horowitz *et al.* (1998), in an extension of the pioneering Banz and Reinganum studies, find that during the period 1980–96, the average return for the smallest size decile — across NYSE, AMEX and NASDAQ — is 1.33 per cent per month compared with 1.34 per cent per month for the largest decile.[6] Ibbotson (1997) also reports a negative 1.7 per cent annual size premium during the 1980s and a positive premium of just 1.2 per cent in the period 1990–96.

Figure 1 shows the size effect for seven European countries over the period 1988–98.[7] With the exception of France, where small companies outperformed large ones, and Spain, where the performance of small and large companies is almost identical, the other five countries — Germany, Netherlands, Spain, Sweden and Switzerland — had exactly the same experience as the UK in the last decade: large firms performed better than small firms. Thus, it appears that in the 1990s small companies lagged considerably in market performance across almost all major capital markets.[8] This is again in sharp contrast to evidence relating to earlier periods, suggesting a positive size effect. For example, Hawawini and Keim (1999) report positive size premia of about 6–9 per cent per annum for France,

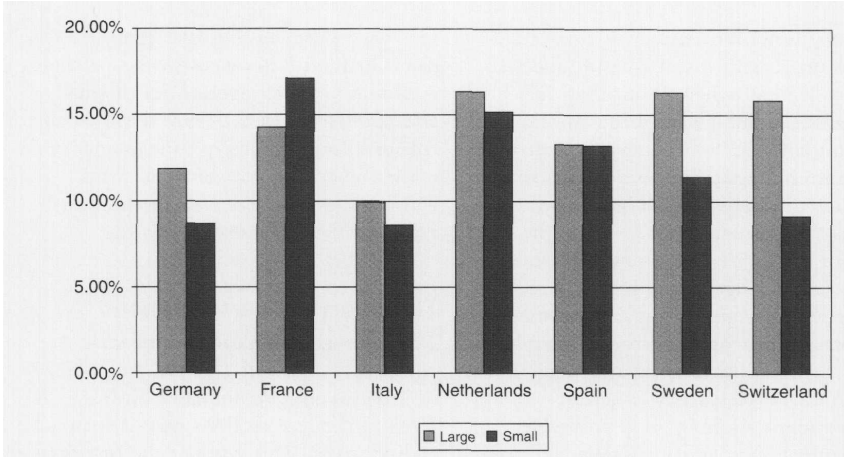

Figure 1 Annual average returns 1988–98

Germany, Spain and Switzerland for long periods before 1989. It is important also to note that in 1998 small companies in Europe generally underperformed their larger counterparts only by a narrow margin. This is in sharp contrast to the disastrous performance recorded by UK small cap stocks.

At this stage two clarification points are in order. The first relates to the robustness of the size effect and its interrelation with other stock characteristics, while the second addresses the definition of firm size. The search for an explanation of the effect revealed a number of other irregularities in asset pricing which appeared not to be completely independent of size. A number of studies, for example, show that the small size effect is concentrated in certain months of the year, while others report that the size spread is related to other stock characteristics. Blume and Stambaugh (1983) and Stoll and Whaley (1983) report a high rank correlation between size and price, while Keim (1988) and Jaffe *et al.* (1989) find similar correlations between size and earnings yield and price-to-book ratios. The main question surrounding these findings is whether these additional effects are independent of or are related to market size. The evidence on this issue is rather controversial. While, for example, Reinganum (1981) and Banz and Breen (1986) argue that the size effect subsumes the PE effect, Basu (1983) maintains quite the opposite, ie size-related anomalies disappear when one controls for the PE effect. Using more recent data covering the period 1962–94, Hawawini and Keim (1999) report pairwise significant correlations between size, E/P, CF/P, P/B and price for NYSE and AMEX stocks. Interestingly, however, the strongest correlation is observed between market size and price (0.78), suggesting that the size effect may be some manifestation of a low price effect.

The evidence for the UK raises even further questions about the robustness of the size effect. Using data for the London Stock Exchange for the period April 1961 to March 1985, Levis (1989a) shows significant differences in risk-adjusted returns for portfolios formed on size, PE, dividend yield and price. It

appears, however, that small firms tend to be firms with low PE ratios and share prices. Hence, when controlling for the possible interactions between the four ranking criteria, it becomes difficult to distinguish among the four effects in general and between size and share price in particular. He concludes that 'the weight of the evidence raises questions about the strength of firm size as an independent determinant of the stock generating process. Its strong dependence with the other firm attributes suggest that it cannot be viewed as either an independent anomaly or a profitable investment strategy on its own' (p. 695).

The second issue relates to the definition of firm size. Although the finance literature almost invariably uses market value as the metric for company size, this is not common practice in other disciplines. The general business literature, for example, tends to define company size using other relevant metrics such as size of assets, volume of sales, book value of assets and number of employees. Berk (1995a) examines the market performance of small firms using various definitions of size. In a sample in which both market value and book-to-market (BM) have a strong cross-sectional relation to average return, he fails to find a similar significant relation between average return and other, non-market, measures of firm size. Thus, although quite often market size is inferred as equivalent to economic size, it is clear that small stocks are different from small firms. Nevertheless, following long-established practice, the terms are used interchangeably in this paper.

These basic observations tend to suggest that the performance of small companies is not isolated from macroeconomic fundamentals, and there is probably a certain cyclicality in the small size premium. These issues are discussed in the following two sections. It is also worth noting that there are some marked differences in the pattern and underlying characteristics of small and large companies. They relate to the risk profiles, underlying fundamentals and market characteristics of small firms. These issues are reviewed in the fourth, fifth and sixth sections.

Time varying performance

The reversal in the fortunes of smaller companies during the period August 1998 to December 1992 and later on from 1995 to the end of 1998 was widespread and dramatic. This was not the first time, however, that smaller companies had gone through a bad spell. Levis (1985) shows noticeable variations in the performance of size decile portfolios during the 1960s and 1970s as well. Such cycles in the size effect are of course not unique to the London market. Reinganum (1992), for example, provides evidence for the period 1926–89 suggesting that the outperformance of smaller firms in the NYSE follow a five-year cycle. He examines the stock returns' behaviour of different size portfolios in period 1926–89 by estimating the autocorrelations of returns over different investment horizons. His results show that, over a one-year horizon, the autocorrelations are positive but not significantly different from zero. The autocorrelations become negative for investment horizons of three-years or longer, peaking in year five. This cyclical pattern of behaviour raises the possibility that the small-firm effect may be driven by economic fundamentals and may be even predictable.

Brown *et al.* (1983) also document considerable variability over time in the performance of small firms. More specifically, it appears that the size effect reverses itself over sustained periods. Fama and French (1988) provide broader and more detailed evidence consistent

Table 1 Autocorrelation of returns

	Return horizon (years)					
	1	2	3	4	5	6
Small	0.217	−0.266	−0.505	−0.573	−0.465	−0.257
	(1.79)	(−1.89)	(−3.89)	(−4.24)	(−1.99)	(−0.68)
Q2	0.098	−0.345	−0.478	−0.510	−0.346	−0.158
	(0.83)	(−2.31)	(−3.65)	(−5.63)	(−2.56)	(−0.73)
Q3	0.085	−0.337	−0.455	−0.475	−0.333	−0.177
	(0.66)	(−2.52)	(−4.14)	(−4.38)	(−2.29)	(−0.95)
Q4	0.002	−0.279	−0.316	−0.344	−0.257	−0.208
	(0.02)	(−2.03)	(−3.32)	(−3.51)	(−1.68)	(−1.08)
Large	−0.067	−0.198	−0.135	−0.174	−0.162	−0.242
	(−0.39)	(−1.49)	(−1.39)	(−2.66)	(−1.11)	(−1.25)
FTA	−0.078	−0.224	−0.101	−0.120	−0.121	−0.261
	(−0.44)	(−1.70)	(−0.91)	(−1.39)	(−0.66)	(−1.06)

Source: Levis and Kalliontzi (1993)

Table 2 Duration of size effect cycles and annualised rates of return for five size portfolios during the cycle

			% Annualised rate of return			
	Months	Cycle	Small	MV2	MV3	Large
May 60–May 62	25	Down	10.5	13.8	12.8	11.5
Jun 62–Mar 64	22	Up	28.6	25.3	17.8	13.0
Apr 64–May 68	50	Down	13.7	14.9	15.1	18.2
Jun 68–Sep 73	64	Up	28.4	20.9	16.9	12.1
Oct 73–Sep 75	24	Down	2.3	−0.8	1.9	9.1
Oct 75–Feb 79	41	Up	54.2	49.6	39.8	28.4
Mar 79–Dec 81	34	Down	19.2	16.5	19.0	20.4
Jan 81–Nov 87	83	Up	40.4	31.0	28.5	26.4
Dec 87–Mar 91	40	Down	2.6	3.8	11.2	17.6

Source: Levis and Kalliontzi (1973)

with the proposition that stock returns are predictable over longer time periods. They test separately various industry returns and size decile portfolios. The estimates for industry portfolios suggest that predictable variation due to mean reversion is about 35 per cent of 3–5-year variances. Returns, however, are more predictable for portfolios of small firms. Predictable variation is estimated to be about 40 per cent of 3–5-year return variances for small-firm portfolios. The equivalent variation falls to around 25 per cent for portfolios of large firms. On the basis of this evidence, they argue that the negative autocorrelations of portfolio returns are largely due to a common macroeconomic phenomenon, and stock returns are related to the business conditions.[9] Poterba and Summers (1988), using an alternative approach that overcomes some of the methodological problems of Fama and French (1988), also find evidence of negative serial correlations over long-term horizons.

To test the mean reversion proposition in the UK context, Table 1 shows slopes in regressions of $r(t,t+12)$ on $r(t-T,t)$ for return horizons from 1 to 6 years, using size quintiles data for the 1956–91 sample period.[10] The slopes are negative for investment horizons of 2–6 years. They peak in the third and fourth year and decline again in years five and six. As in the case of the US, this U-shaped

pattern of regression slopes is particularly pronounced for smaller firms' portfolios.

Table 2 provides descriptive statistics of the size premia during the business cycle in the period 1960–91. The first full cycle covers the period May 1960 to March 1964; the second extends from April 1964 to September 1973, the third from October 1973 to February 1979, while the last full cycle, in the period under consideration in this study, covers the period March 1979 to November 1987. Since then, the downward part of a cycle has been witnessed, which ended in March 1991. The length of a full cycle ranges from 47 months (May 1960 through March 1964) to 117 months (March 1979 through November 1987). The upward half-part of a cycle is always longer than its declining counterpart. The average duration of the down cycle is 34 months, while the equivalent length of the up cycle is 52 months. The irregular length of the small-firm cycle does not lend itself to easy forecasts. This table also reports the annualised rates of return for each of the four size portfolios during each half cycle. The results clearly demonstrate that small companies tend to underperform in economic contractions and outperform during periods of economic expansion.

In spite of the persistent evidence of predictability of long horizon returns, the source of this predictability remains a subject of continuous controversy. Some argue that it is due to some form of irrationality (such as fads, speculative bubbles or noise trading) that forces stock prices to deviate temporarily from their fundamental values and generates negatively autocorrelated and, hence, predictable returns. The irrational type of arguments proposed by Shiller (1984), DeBondt and Thaler (1985 and 1987) and Lakonishok *et al.* (1994) can take a variety of different forms. Although a full discussion of this type of research is outside the scope of this paper, it is worth mentioning that the 'noise trading' story may be of some direct relevance to the size effect. It is argued that small companies, being held predominantly by private investors at least in the US, are more prone to sentiment swings than their larger counterparts. Others maintain that it is a consequence of rational time variation in expected returns as business conditions, investment opportunities and risk aversion change through time. The fact that the variation in expected returns is largely common across assets and is related to business conditions in plausible ways, adds credence to the rational type of explanation.

Small companies and macroeconomic conditions

Modern finance theory suggests that prices of financial assets are determined by the expected changes in future cash flows and the discount rate applied to them. Thus, the observed differences in the returns of different size firms should be related to the different reactions of the cash flows and discount rates for such firms to changes in the economic environment. Such disparate reactions to economic conditions are likely to be due to the differences in the underlying fundamental characteristics of small, medium and large firms.

There is a plethora of anecdotal and *ad hoc* statistical evidence that small companies are more sensitive to hikes in interest rates, changes to monetary policy and recessions in general. Jensen *et al.* (1997, 1998), for example, argue that the relationships between stock returns and firm size varies across monetary periods. The premium for small firms is positive and significant in periods when monetary policy is in an expansive mode, but insignificant or negative in cases when policy is restrictive.[11] Anderson (1997)

also reports that the size premium is positively related to inflation and the term structure of interest rates, while Speidell and Stone (1997) and Levis and Liodakis (1999) find that changes in industrial production lead to small stock returns in all major capital markets.

Chan *et al.* (1985) argue that returns are different because they have different sensitivities to the risk factors determining asset prices.[12] They show that small firms are more exposed to production risk and changes in the risk premium. The significant coefficient for the risk premium factor suggests that smaller firms are more exposed to economic downturns. Thus, firm size proxies for some unmeasured risks not captured by the conventional risk measures.

He and Ng (1994) examine whether size and BM are proxies for risks associated with the Chen *et al.* (1986) macroeconomic factors or are just measures of a stock's sensitivity to relative distress. They find that the macroeconomic risks related to the CRR factors are not able to explain the role of BM in the cross section of average returns on NYSE, AMEX and NASDAQ stocks. Instead, they find that size, BM and relative distress are related. Moreover, their results imply that BM and size do not capture similar risk characteristics important for pricing stocks.

The above studies assume stationarity both in the time series behaviour of the risk coefficients and the equivalent behaviour of risk premiums. Such tests are usually referred to as unconditional tests of asset pricing models because the moments are considered to be independent of any *ex ante* known information. They are generally more popular because they require rather short testing periods, during which betas and risk premia are considered to be time invariant. But unconditional tests of asset pricing models completely ignore the dynamic behaviour of expected returns, which is somewhat inconsistent with the evidence documenting predictable time-variation in returns.

Conditional asset pricing

More recent research has concentrated on the time-series properties of risk premia rather than long-term averages. Conditional asset pricing models are in fact motivated by the empirical evidence reporting the existence of time-series return predictability and by the belief that investors update their expectations using the latest available information in the market. Using this approach, Ferson and Harvey (1991, 1993) and Ferson and Korajczyk (1994) demonstrate that the time variation in expected returns is mostly attributed to changes in risk premia rather than movements in the betas. By averaging the risk premia over time (as done in the unconditional tests), the properties of their dynamic behaviour are missed. Specifically, in some states of the economy, some factors may be rewarded, whereas they may not be priced in some others. Thus, if the risk premium associated with a certain factor is highly volatile, its average may turn out to be statistically insignificant when, in fact, it may be important to explain the cross section of returns in some states of the economy. For example, Ferson and Harvey (1991), using a version of the Fama and MacBeth (1973) methodology, report that the average market risk premium is not statistically significant in a multibeta model. Using a conditional asset pricing model, however, they find that the expected compensation for the stock market is larger at some times and smaller at other times, depending on the economic conditions. In particular, they show that it varies

counter-cyclically. This type of conditional model is better suited for studying the performance of small companies over time.

In sharp contrast to the voluminous research in the USA relating the cross-sectional behaviour of stock returns to the macroeconomy and individual risk characteristics, there is very little work relating to the UK market.[13] In an attempt to account for the differences in risk characteristics between size and value strategies, Levis (1995a) tests a conditional APT model for the period 1970–91 using UK data. Using the standard Fama and McBeth (1973) methodology and 20 market size portfolios, he tests an APT model with the same five macroeconomic factors[14] — market, growth of industrial production, inflation, term structure and default premium — as Chen *et al.* (1985). His results show that the average market betas for small firms are lower than their larger counterparts.[15] The beta coefficients of the other four economic factors are less consistent. Small firms, for example, are more likely to be adversely affected by unexpected increases in inflation and deterioration in credit conditions.

Analysis of the time series pattern of the betas for each of the economic factors suggests large variation for the smallest and largest portfolios and relatively stable exposure coefficients for the intermediate portfolios. It is also worth noting that the market betas of smaller firms have increased consistently since the early 1970s and ended the period considerably higher than those of larger firms; on the contrary the betas of this latter portfolio declined from about 1.1 in the early 1970s to just below 0.9 in 1991. Thus, since the late 1980s betas of smaller firms on the London Exchange appear consistent with the pattern of betas documented in US studies.

Levis (1995a) also documents considerable variability over time in the risk premia for each of the five economic factors. This is particularly pronounced for the market and the growth rate of industrial production premia; they take a wide range of values and can change signs over a relatively short time period. The market risk premium associated with the size procedure increases during economic downturns and peaks near business cycle troughs. This is consistent with the notion that the required rates of return for different types of risk are not constant over time; they vary with economic cycles and certain size companies are more susceptible than others to different types of economic environments.

Risk characteristics of small companies

Although the studies discussed in the previous section suggest that there are risk differences, in terms of exposure to macroeconomic conditions, between small and large companies, they do not suggest why.[16] Smallness by itself does not necessarily imply higher risk, and differences in market capitalisations do not explain why small and large companies have different responses to economic news. Moreover, the traditional beta measure of risk does not appear sufficiently robust to capture the risk exposure of small companies.

Of course the failure to capture the riskiness of the small companies by conventional risk measures could be attributed to some type of beta mis-estimation. Chan and Chen (1988) show that when more accurate estimates of betas are employed, no size-related differences in average returns are observed. In a related paper, Handa *et al.* (1989) argue that the size effect is sensitive to the return measurement intervals used for beta estimation and

present results suggesting that it can be explained by betas estimated with annual returns. Of course it may sometimes be possible to devise some type of beta estimate to accommodate the problem in hand but, in general, Jegadeesh (1992) demonstrates that betas do not explain the cross-sectional differences in average returns.

Chan and Chen (1991), in one of the most important contributions to the literature, explore the fundamental risk characteristics of smaller companies. They argue that small firms are marginal firms in the sense that their prices tend to be more sensitive to changes in the economy and are more exposed to adverse economic conditions. More specifically, small firms are more likely to be inefficient producers, to have high financial leverage and limited access to capital markets, particularly at periods of tight credit conditions. As a result of such fundamental differences with larger (healthier) companies, marginal companies react differently to the same piece of macroeconomic news. The evidence in the previous section is consistent with this interpretation. They also provide a battery of tests that are consistent with the broad underlying rationale of their proposition. More specifically they show: First, a total of 66 per cent of the constituents of the bottom size quintile found themselves in this position as a result of dropping from higher size quintiles, suggesting that this grouping contains a large proportion of firms that have not been doing well. The proportion of companies moving up the quintile ladder is relatively small. Secondly, after controlling for differences in industrial classification, the average return to assets of the bottom quantile firms during 1966–84 is about 5 per cent lower than the equivalent return of the firms in the top quartile. (The operating income before depreciation over total assets for quartile 1 is 12.1 per cent, while the equivalent ratio for quartile 5 is 17.8 per cent.) The differences in the average interest expenses over operating income before depreciation ratio are even more striking; the interest expenses of firms in the first quartile amount to 25 per cent of operating income before depreciation, while those of the top quartile firms are only 14.4 per cent. Thirdly, among the firms that have cut their dividends in half or more the year before, 50 per cent are in the bottom size quintile. Fourthly, the probability that a small company is highly leveraged[17] is almost four times higher than that of a large company.

There is only limited research currently available focusing on these types of risk. This is rather unfortunate, since firm mortality, dividend policy and leverage may have a significant impact on expected cash flows and discount rates. There is, however, some evidence that appears to corroborate the results of Chan and Chen (1991). Queen and Roll (1987), for example, show that there is a strong inverse relation between unfavourable mortality and size. About one-quarter of the smallest firms are halted, delisted or suspended from trading within a decade, and about 5 per cent actually meet this fate within a year. In contrast, less than 1 per cent of the largest firms expire from unfavourable causes even over the longest observation period.

A high mortality rate among small firms is also observed in the UK.[18] A firm, of course, may be delisted for different reasons, such as a straight takeover, suspension or liquidation. Figure 2 shows that the probability of such incidents occurring is significantly higher for small to medium-size companies. On the basis of the record during the period 1958–88, companies in deciles 3–6 are more likely to be the

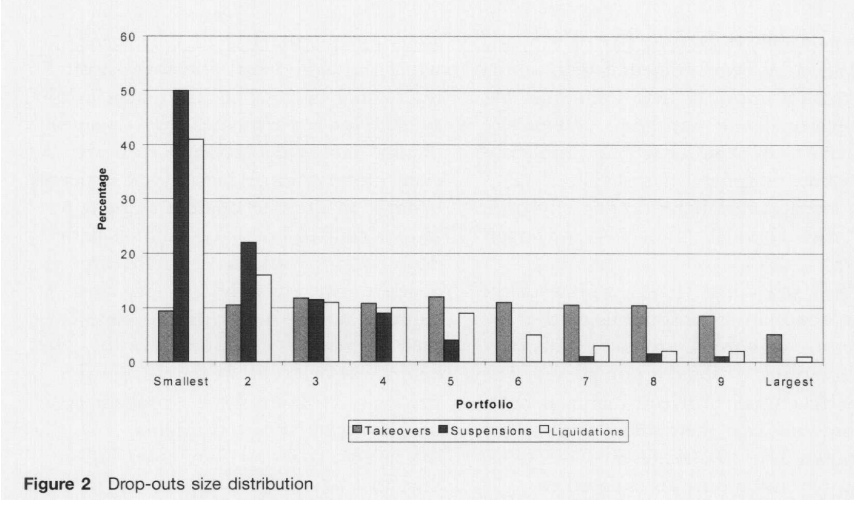

Figure 2 Drop-outs size distribution

targets of takeovers than companies in deciles 9 and 10. During the same period, 95 per cent of the suspended companies belonged to deciles 1–5, with a staggering 50 per cent coming exclusively from the first smallest decile. Liquidations were also heavily concentrated in deciles 1–6 with 45 per cent from the first decile alone. Thus, there is little doubt that smaller companies are more vulnerable than their larger counterparts to some type of event risk.

To access the life-cycle profile of the typical UK small company, Levis (1989b) examines the interquintile movement of quintile size portfolios over a five-year period. Although the analysis has been conducted over a full 10-year period in the 1980s, the basis year 1984 shown in the graph represents a good basis for assessing the life cycle of small companies. During the period 1984–88, the HGSC index outperformed the FTA index by an average of 7.2 per cent per annum. Thus, one would expect to find some substantial upward interquintile movement during this period. In this sense, the results are rather surprising. A remarkable 57 per cent of the smaller companies that started in the smallest quintile in January 1984, excluding those that have dropped out of the sample for various reasons, are still in the same grouping at the end of 1988. Of the total population of companies that started in quintile 4 in January 1984, only 21 per cent moved to the top quintile, while 26 per cent moved down to smaller quintiles. In short, the evidence from the London market is consistent with the proposition that, even at the best of times, the outperformance of small companies is driven by a relatively small number of such companies with exceptional performance. Most of the small cap universe is static and is composed of companies that migrated to this group as a result of past bad performance or are almost permanently stuck in this position following years of indifferent performance.

Table 3 shows three measures of gearing for firms in five market size portfolios: short-term borrowings over assets, long-term borrowings over assets and total borrowing over assets. Short-term borrowings refer to loans

Table 3 Borrowing ratios for five market size portfolios 1971–90

Portfolio	Short loan/total assets	Long loans/total assets	Total loans/total assets
MV1	11.1	4.9	15.9
MV2	10.4	5.8	16.2
MV3	8.5	6.9	15.3
MV4	7.5	9.0	16.4
MV5	6.4	12.5	19.1

Source: Levis and Kalliontzi (1993)

shorter than a year. The data were collected from Datastream, and cover the period 1971–90. The number of firms included in the sample varies from year to year, ranging from 330 in 1971 to 1,232 in 1989. Market size portfolios were constructed in the same way as for rates of return, but they are based on the total number of firms for whom data were available in each of the 20 years. The results reveal significant differences between small and large firms. While all firms appear to use roughly the same amount of total loans as a percentage of their total assets, there are nevertheless significant differences in the composition of these borrowings. Smaller firms rely more on short loans; the average ratio of short loans to assets decreases monotonically with firm size. It starts from 11.1 per cent for MV1 and declines to 6.4 per cent for MV5. In contrast, the ratio of long loans to total assets follows a reverse pattern. The average ratio for MV1 is 4.9 per cent and increases to 12.5 per cent for firms in the largest market size portfolio.

Finally, it is worth mentioning again the liquidity issue that is widely recognised as one of the key impediments to successful small companies' strategies. Liquidity, or the lack of it, is also regarded by the managers of small companies themselves as the key disadvantage for their shares. In a recent survey of 165 companies, 36 per cent cited this as the most detrimental factor to the performance of their shares.[19] Keim (1989) reports that small firms have, on average, 11 times the percentage spread of large firms. The differentials in bid-ask spreads between small and large can be significant, but they are not the only components of the total transaction costs. Bhagat (1993) estimates that the total round-trip trading costs can range from 200 to 300 basis points under normal implementation conditions and could be even higher in the face of unfavourable market impact and/or opportunity costs.[20] These costs detract from overall performance. With an annual turnover of 150 per cent, the performance barrier to simply break even with the passive alternative would be as high as 300 to 450 basis points.

In short, the evidence in both the USA and the UK clearly demonstrates that small companies differ from their larger counterparts in a number of key fundamental characteristics which make them more vulnerable to macroeconomic conditions. The increased riskiness may be reflected directly in their expected earnings or, equally importantly, may affect their valuation by the increased risk premia required for such companies by the investors. The next two sections discuss the earnings record of small companies.

Size and earnings fundamentals

Corporate earnings are normally regarded as a main measure of general

Table 4 Earnings growth profile and PE ratios for size deciles, 1980–89

Market size	% EPS growth	PE ratio	% of total in sample	% in sample with high EPS growth	% in sample with low EPS growth
Small	19.5	13.7	6.3	7.5	5.1
2	14.5	14.4	7.7	7.7	7.6
3	16.0	13.4	8.1	8.7	7.5
4	16.0	13.8	8.9	9.9	8.0
5	14.0	13.9	9.8	10.2	9.4
6	9.4	12.8	10.5	10.3	10.6
7	7.7	12.7	11.8	10.4	13.3
8	7.0	13.4	11.9	11.0	12.8
9	9.4	12.5	12.8	12.8	12.8
Large	5.8	7.5	12.2	11.5	12.9
Market	10.9	12.7	100.0	100.0	100.0

Source: Levis (1991)

macroeconomic activity.[21] They are also essential for most contemporary stock valuation models. There is solid evidence suggesting that over sufficiently long periods, stock performance maps reasonably well on earnings. Easton and Harris (1991) for the USA and Strong (1993) for the UK, among others, show that stock returns are associated with both earnings levels and earnings changes.[22] Probably the most telling evidence is provided by Fama and French (1992, 1993, 1995). Their time-series regressions of annual returns on fundamentals (equity income/book equity, earnings before interest and sales) clearly demonstrate that the size factor in returns is related to the size factor in fundamentals. This is consistent with the hypothesis that the size factor in fundamentals is the source of the size factor in returns.

Ragsdale *et al.* (1993) show that in the period 1975–81 of small-stock market outperformance in the US, the aggregate net income of the small-capitalisation quintile of stocks grew at a compound annual rate of 18.5 per cent, while that of the largest capitalisation quintile grew at only 9.1 per cent. During the 1984–90 period of small-stock market underperformance, the smallest stocks reported negative aggregate net income for the period, while the largest quintile reported positive aggregate net income and grew 4.3 per cent on a compound annual basis. Thus, the reversal of the market performance of small stocks is mapped to the pattern of earnings in the two periods. Ragsdale *et al.* (1993) also show that earnings fundamentals play a significant role in explaining both the strong performance of small stocks during 1974–83 and their underperformance in the 1984–90 period. More specifically, they identified the increased leverage ratio of smaller firms as one of the factors that might have contributed to the shifts of relative earnings performance of small stocks.

The UK evidence on the link between earnings growth, market size and stock valuation remains tenuous. Levis (1991) examines the history of earnings growth for ten market size groups. The results in column 2 of Table 4 show that small companies have outpaced the EPS growth of their larger counterparts by as much as 13 per cent per annum in nominal terms during the period 1980–89. Moreover, the evidence points to a gradual decline in EPS growth as one moves towards the larger size deciles. The remarkable earnings

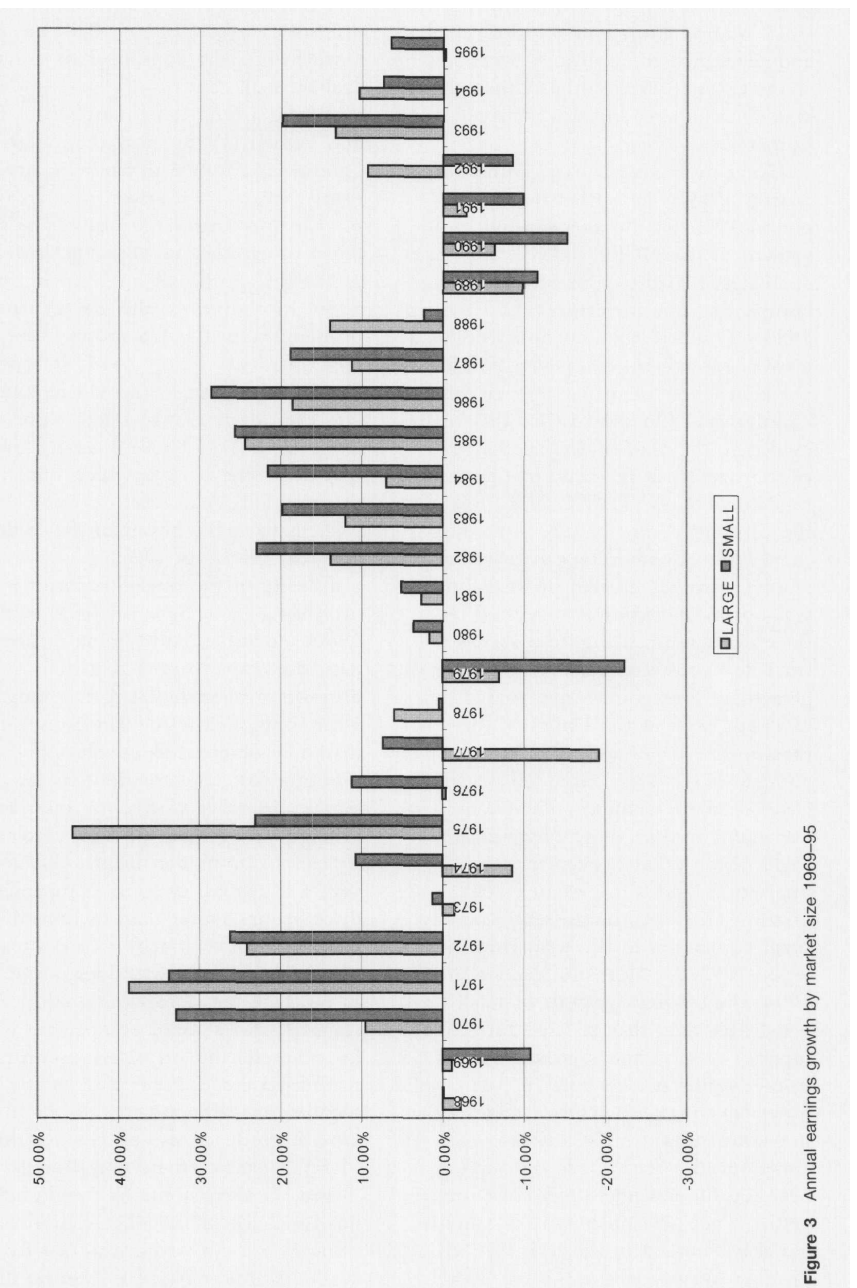

Figure 3 Annual earnings growth by market size 1969–95

outperformance of small firms during this period appears to be reflected in the stock returns. During the 1980s, small and medium-size companies were trading at multiples markedly higher than their very counterparts and still managed to outperform.

Using more recent data, Dimson and Marsh (1999b) show that during the period 1955–88 the average dividend growth of the HGSC index was 1.9 per cent higher than that of non-HGSC companies. The pattern reversed during 1989–97, where the annualised dividend growth for HGSC companies was 3.4 per cent lower than that of their larger counterparts. On the basis of this evidence, they conclude that the reversal of the size effect is linked to the fundamentals. A closer examination of the earnings record of UK firms during the 1990s, however, reveals that the relative earnings growth of small firms was not as disastrous as suggested by their stock returns. Figure 3 shows that small firms suffered negative earnings growth in four consecutive years from 1989 to 1992; at the height of the recession — 1990 and 1991 — large companies have also recorded negative changes in the earnings, albeit somewhat less dramatic than those observed for small firms. What is even more interesting, and to a certain extent puzzling, is the earnings behaviour of small companies in the following three years, 1993–95. With the exception of 1994, the earnings growth of small firms was better than that of large firms. The superiority in earnings growth ranges from about 9 per cent in 1993 to a solid 6 per cent in 1995. Thus it appears that in recent years the UK market experienced a remarkable decoupling between fundamentals and stock returns performance. A similar type of pattern has also emerged in the US. While earnings growth in the Russell 2000 index was almost twice as large as the equivalent growth for the S&P 500 in the first two quarters of 1998, the price performance gap continued to move against small caps.

Taking a long-term perspective, Fama and French (1995) show that, after controlling for BM differences, small firms tend to have lower earnings on book equity than large firms. The size effect in earnings is, however, largely due to the low profits of small stocks after 1980. In contrast to the UK evidence, profitability in the US shows little relation to size before 1981. It appears that the recession in the US in 1981 and 1982 turned to a prolonged depression for small stocks. They observe, however, that 'for some reason, which remains unexplained, small stocks do not participate in the boom of the middle and late 1980s' (p. 132).

In spite of the overall superior earnings growth by small firms in the 1980s, documented in Table 6, however, it is important to note that the proportion of smaller/larger companies with above/below median growth is not markedly different from their proportional representations in the sample. In other words, the high annual average EPS growth of small companies appears to be predominantly due to the very fast growth of some companies in these groups rather than to the universal faster growth record of such companies. Moreover, low growth does not appear to be a unique, across the board, characteristic of large companies. While, for example, the very large companies accounted for 12.2 per cent of the population in the sample, the high EPS growth group contained not less than 11.5 per cent of these companies.

Table 5 sheds some further light into this issue. The standard deviation of earnings growth within the first five size deciles is almost twice as large as the

Table 5 Average EPS growth and within group standard deviation (SD) of EPS growth

	1980–82		1982–84		1984–86		1986–88		1987–89	
	Growth	SD	Growth	SD	Growth	SD	Growth	SD	Growth	SD
Small	2.7	1.17	29.8	1.53	15.7	0.83	24.5	1.24	21.0	1.39
2	6.7	1.19	10.4	1.04	20.6	1.46	26.6	1.46	21.7	1.35
3	3.0	1.00	15.6	1.13	19.1	1.19	25.4	1.12	20.3	1.07
4	−3.5	0.77	15.8	0.94	20.3	0.94	16.4	0.93	21.1	1.04
5	0.1	1.00	9.6	0.89	21.4	1.23	16.7	1.12	19.0	1.15
6	−0.7	0.82	12.7	0.98	9.5	0.70	18.5	1.08	20.5	1.18
7	−3.9	0.59	9.9	0.87	11.9	1.04	19.1	1.15	17.7	0.96
8	−4.4	0.58	6.8	0.86	12.1	0.83	7.4	0.79	7.5	0.77
9	−2.1	0.65	10.2	0.77	10.6	0.73	9.3	0.78	13.5	0.83
Large	−2.2	0.64	6.8	0.65	6.0	0.63	9.1	0.66	11.4	0.74

Source: Levis (1991)

volatility of large companies. It is this particular aspect of risk that is of more concern to investors than volatility in prices. It means the fundamental performance of smaller companies, as a group, is much more difficult to assess and predict than that of large companies. It appears that sometime in 1988 the market suddenly realised that smaller companies could not any more match their past earnings growth; thus it became apparent that their PE ratings were out of step with future prospects. The unavoidable correction was already well under way. Table 5, for example, shows a jump in the earnings volatility and a significant narrowing of the gap in earnings growth between small and large companies during the period 1987–89. Bank of England (1991) reports that large companies were the sole group to experience operating profits growing faster in 1989 than in 1988. This group also saw the most rapid growth in overseas sales. Income gearing rose rapidly for all three groups; for the smallest, this is most likely to have reflected their relative dependence on bank finance combined with some distress borrowing.

The volatile nature of small firms' earnings is another key ingredient in understanding the differences in market performance across different-size firms. We know that there is a significant, albeit modest, association between earnings and stock returns during the same time period, but this says very little about the relation between current earnings and future returns. On the other hand, Ou and Penman (1989) show that financial statement information, applied mechanically across companies can be used to predict subsequent-year earnings changes and systematically earn abnormal investment returns. Thus, the relation between current earnings and future returns may differ across different-size firms depending on how predictable future earnings are.

Ettredge and Fuller (1991) show that a larger number of small firms report negative earnings over any single period; but firms with negative earnings in any one year appear to perform much better in the following year than firms with positive earnings. Firms with negative earnings have better risk-adjusted returns in the following year. They argue that the market appears excessively to discount stocks of firms reporting losses and subsequently corrects for this over-reaction. Alternatively, it might be that the market systematically underestimates subsequent earnings recoveries by firms reporting losses.

The differential performance of small firms is sometimes perceived as being

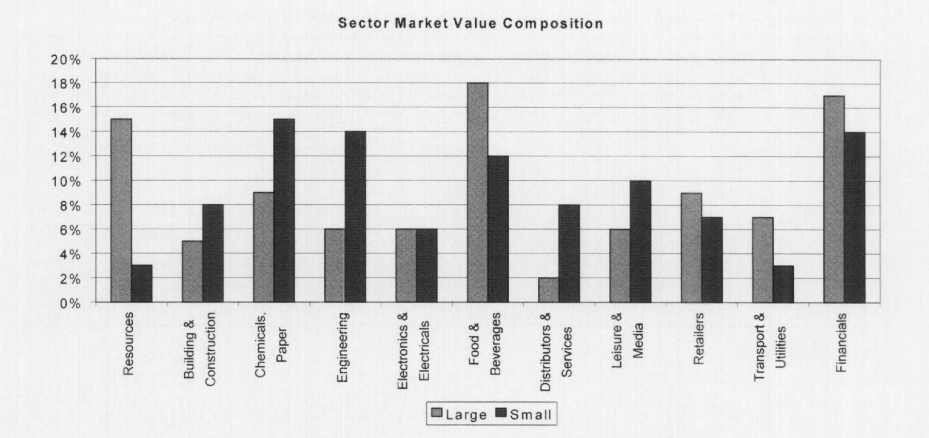

Figure 4 Sector market value composition of large vs small companies (average 1968–97)

linked to the fortunes of certain industries at certain points in time. The argument is based on the fact that small and large firms are not evenly distributed across all industrial sectors. Figure 4 shows the sector market value composition of large and small firms and provides considerable support for this view. In five out of the 11 industrial sectors — building and construction, chemicals, paper and packaging, engineering, distributors and services, and leisure and media — small firms account for a higher proportion of the sector in terms of market capitalisation; in contrast, resources, food and beverages, transport and utilities and financials are dominated by large firms.

Although the uneven distribution of large and small companies may result in sector-related performance differences, the evidence provides very limited support towards this argument. Figure 5, panels A–D, show the performance of small and large companies for 11 industrial sectors for the 30-year period 1968–97 and three 10-year sub-periods. Although there are some differences in the performance of individual sectors in the two 10-year periods of 1968–77 and 1978–87, the size effect is certainly not driven by a single industrial sector. Smaller firms appear to have outperformed their larger counterparts in almost every single sector. In a similar vein, the dramatic underperformance of smaller firms during 1988–97 is widespread across all industries. In some industrial sectors, such as resources, building and construction, chemicals and paper, and retailers, smaller firms suffered an absolute decline in market values. At the same time, it is worth noting that the strong market performance of the FTSE 100 index is to a certain extent driven by the strong performance of utilities and financials, both sectors heavily populated by larger companies. Thus, it is evident that size rather than industry is the key factor in determining market performance.[23] From the perspective of the practising fund manager, this evidence suggests that a small cap strategy based on sector plays is likely to be only of limited value. The size effect is somewhat linked to the industrial performance but it is not determined by it.

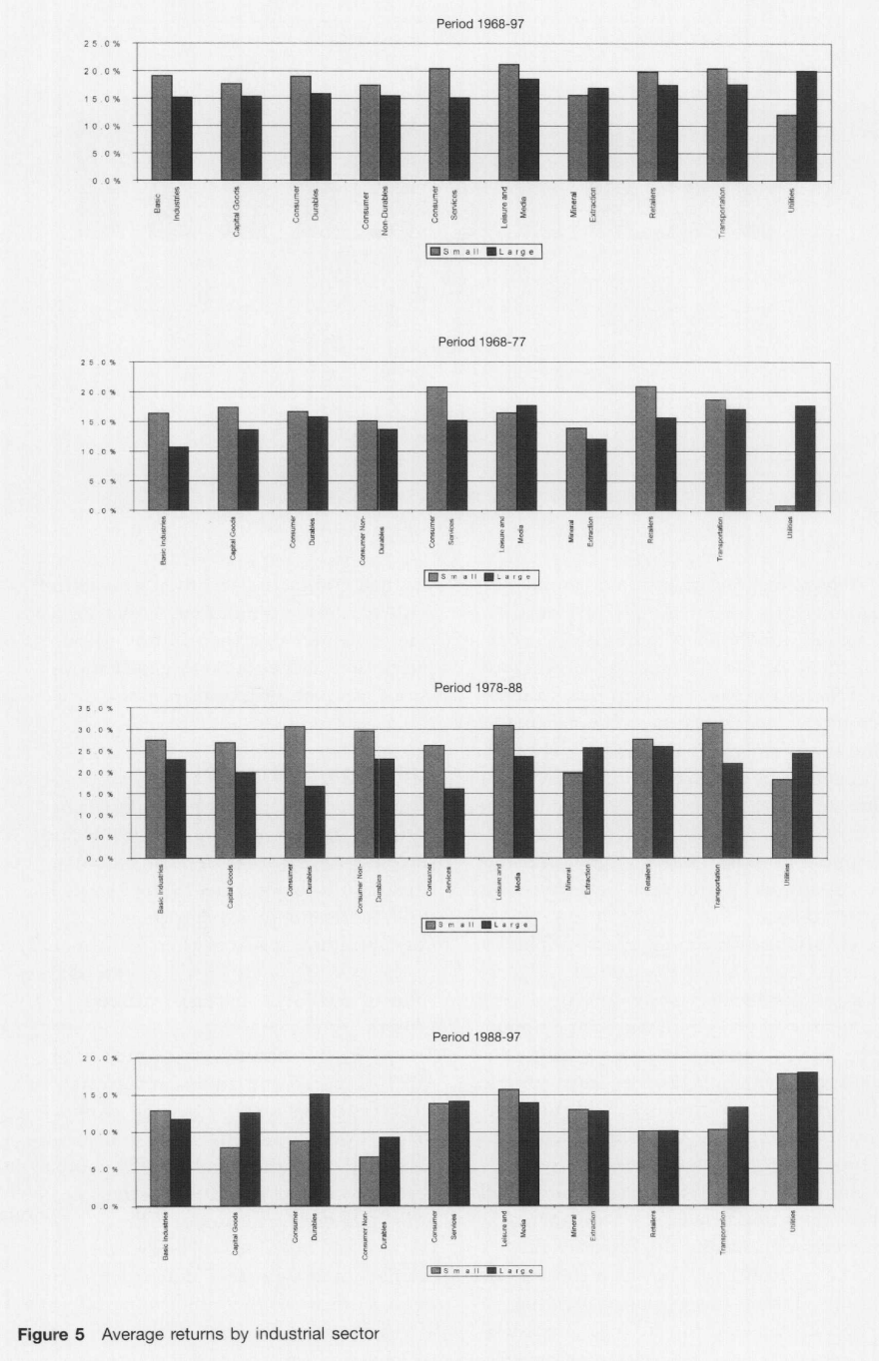

Figure 5 Average returns by industrial sector

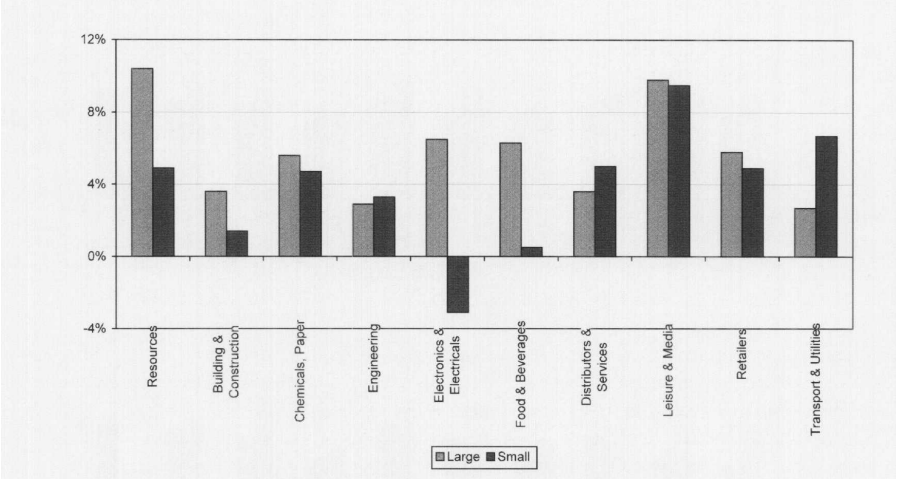

Figure 6 EPS growth by industrial sector (annual average for the period 1968–97)

Figure 6 shows the average annual earnings growth for the 30-year period 1968–97 for the same industries, except for financials, as in Figure 8. Although it is difficult to draw any firm conclusions about the association between earnings and market performance from a visual inspection of the two figures, there appears to be a broad consistency between the two sets of data. It is reassuring, for example, to observe that large companies across almost all industries performed better than smaller ones both in terms of stock price and earnings growth. The notable exception is the case of distributors and services where small companies are superior on both counts. The leisure and media sector is also an interesting example, as it exhibits some of the strongest performances both in price and earnings terms. Of course identifying a broad historical consistency between earnings and prices across large and small firms does not answer the fundamental question concerning the disparity in market performance between the two size groups. Taking this evidence together with our clues on the risk characteristics of small companies and their association with economic conditions, however, leads one to believe that the solution to our puzzle lies in the market's expectations about the path of future earnings.

Earnings forecasts

The mere existence of strong average earnings growth rates in the 1980s and the sluggish earnings performance of small companies in the 1990s is not, in itself, sufficient to explain their corresponding stock market performances in the two decades. First, we saw that, in spite of the lower average earnings growth by the small companies in the 1990s, their year-on-year growth after 1993 outpaced the equivalent growth of large firms. Secondly, earnings growth on its own does not convey the full picture about the true profitability of a company. Return on equity (ROE) is often an equally if not more important component of value.[24] Thirdly, the dramatic and persistent underperformance of small firms in the late 1980s and early 1990s indicates that the deterioration of

earnings must have taken the market by surprise. Earnings growth forecasts, for example, may be biased if analysts fail to incorporate all available information. Anomalous behaviour in earnings forecasts may be associated with anomalous behaviour by market participants in price formation. Even when the available forecasts are efficient, however, the market may be slow or completely fail to incorporate such information into their pricing process.

The evidence of inefficient upwardly biased earnings forecasts, across the whole spectrum of stocks, is now well established.[25] In fact, Dreman and Berry (1995) argue, on the basis of their study of analysts' forecasts for US stocks from 1972 through 1991, that only 'a minority of estimates fall within a range around reported earnings considered acceptable to many professional investors' (p. 30). There is, however, a controversy as to whether analysts under-react or over-react to available information. While, Abarbanell (1991), Abarbanell and Bernard (1992) and Ali *et al.* (1992) report that analysts systematically under-react to new information, DeBondt and Thaler (1990) maintain that analysts systematically over-react. Easterwood and Nutt (1999) provide evidence that appears consistent with both views. They report that analysts systematically react to information in an optimistic manner by under-reacting to negative information and over-reacting to positive news. A third view that is attracting considerable attention maintains that analysts and investors simply observe abnormal earnings and price performance over a relatively short time period and extrapolate these trends to the future.[26]

The apparent differences in the quality of forecasts across different types of firms may have an impact on their valuation. If forecasts for small companies, for example, are less efficient than those associated with large companies, as the evidence tends to suggest, then at least some of the variability in the size effect may be linked to the pattern of these forecasts. In an early study, for example, Givoly and Lakonishok (1984) examine the actual and forecasted earnings of small firms for the 20-year period from 1963 to 1981. They demonstrate that growth of economic fundamentals is inversely related to size, and this relationship is almost monotonic. They document significant differences between large and small firms for a variety of growth measures such as gross margin, net operating income, sales etc. They conclude that the size effect in the USA before 1983 is due to the understatement of the economic growth of such firms.

Earnings of smaller firms may be under/over-estimated because information on small firms is scarce as a result of their shorter histories and/or of their limited analysts' following.[27] This of course is not surprising. Not only are there potentially greater financial gains for investors in the identification of mispriced securities for large firms, but there are also greater economic incentives for analysts' following of large firms. In any case, the end result is that analysts' earnings forecasts for small firms are generally inferior to those produced for large firms. Elgers and Murray (1992), using I/B/E/S consensus financial analyst forecasts and forecasts based upon the anticipatory behaviour of security prices, show that firm size is positively associated with earnings forecasting accuracy. Moreover, Brown *et al.* (1987) find that forecasts based on time series models may be more efficient for small companies than analysts' forecasts.[28] This may be regarded as an opportunity for some active and skilled managers[29] because of its possible implications for the pricing of such stocks. An analysis by Arbel and Strebel (1982) suggests that,

over a 10-year period, the shares of those firms neglected by institutions outperform significantly the shares of firms widely held by institutions. This superior performance persists over and above any small-firm effect. This had led to the widespread belief that the size effect is more likely a 'neglect' effect.

We know that the release of interim and annual earnings is associated with both increased trading volume and increased stock return variability. Forthcoming earnings announcements stimulate private information acquisition by investors in the period prior to announcement. In addition, there is an increase in public available information prior to anticipated announcements. Both private and public information are expected to increase in the pre-announcement period. Freeman (1987) shows that the level of pre-disclosure information available for a firm increases with firm size. More recently, Byard (1998) finds that the average quality of both public and private information increases during the 30 days prior to annual earnings announcement. Firm size is found to have little or no impact upon the average quality of public information available to analysts. The average quality of the private information acquired by analysts is, however, found to be increasing with size, which is consistent with size-related incentives for analysts to engage in private information acquisition.

A variation of this 'neglect' effect is also reported in the early study of Foster *et al.* (1984). They show that small firms are likely to react more negatively (positively) to negative (positive) earnings forecasts[30] in the two days surrounding the announcement. The return differentials between small and large firms are quite marked; while the cumulative abnormal return in the two days around a negative forecast error is only −0.81 per cent for large firms, it rises to −1.83 per cent for the smallest size decile portfolio. The corresponding price reaction differential to positive forecast errors is even more pronounced — a positive 0.5 per cent for large firms against 2.58 per cent for the small firms. The equivalent stock returns around a longer window of 60 days around the announcement provide even further support to the apparent over-reaction of small firms to unexpected earnings announcements. Similar results are reported by Bernard and Thomas (1990) as well. They find that the failure of stock prices to reflect fully the implications of current earnings for future earnings is significantly more pronounced for small companies. Given that there are no significant differences in the predictability of future earnings from a series of historical earnings between large and small firms, the evidence suggests some pattern of excessive over-reaction to earnings announcements of small firms.

Mott and Coker (1993) provide further and more detailed evidence on the asymmetric response between small and large companies earnings' surprises. They show that small cap stocks over the period 1988–93 reported fewer positive surprises than negative ones in any given quarter. An average 19.8 per cent of the companies reported positive surprises over the period, whereas 25.6 per cent of the companies posted earnings disappointments. Furthermore, they show that, on average, a positive surprise results in an increase in stock prices of 2.1 per cent relative to Russell 2000 in the first month after reporting earnings; this figure rises to 12.9 per cent over the ensuing 12 months. In contrast, negative surprises underperform both the universe and the market across all periods. Overall, negative surprises fall 0.9 per cent relative to the Russell 2000 in the

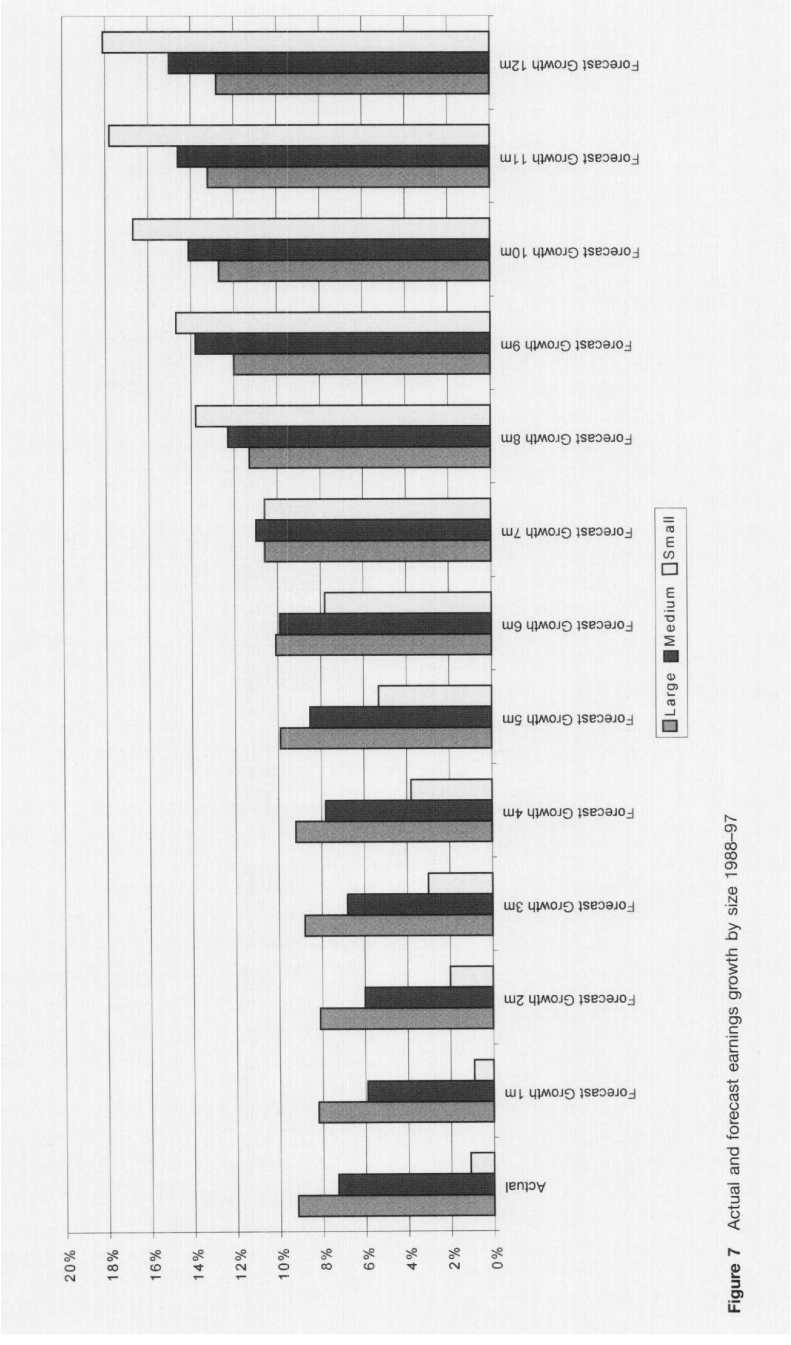

Figure 7 Actual and forecast earnings growth by size 1988–97

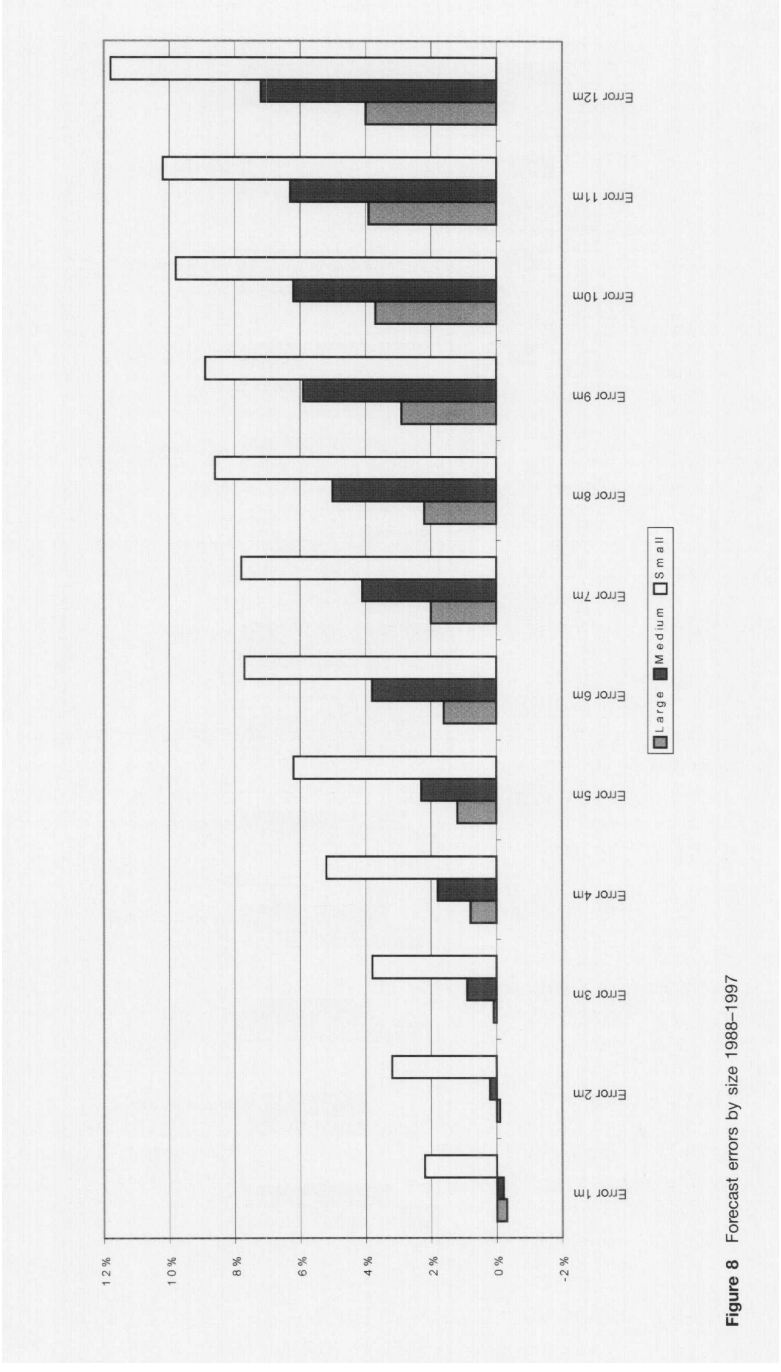

Figure 8 Forecast errors by size 1988–1997

Table 6 One year buy and hold returns for size portfolios with positive and negative surprises (1987–97)

	Small		Large	
	Positive (%)	Negative (%)	Positive (%)	Negative (%)
1987	−1.41	−8.09	−8.47	−17.88
1988	23.33	3.48	23.67	10.89
1989	−3.38	−17.61	10.67	−3.20
1990	12.41	−9.65	7.59	−2.39
1991	41.65	3.77	19.74	2.23
1992	43.26	22.56	22.89	16.27
1993	35.92	9.01	13.21	3.42
1994	13.19	−7.26	12.67	8.98
1995	39.79	15.61	29.18	6.77
1996	9.81	−14.36	14.33	−2.12
Average	21.46	−0.25	14.55	2.30

Source: Levis and Liodakis (1999)

first month after reporting earnings, with the relative decline falling to 3.5 per cent at the end of a 12-month period.

A number of UK studies, such as Patz (1989), Capstaff *et al.* (1995), Hussain (1998) and Levis and Liodakis (2001) also suggest that, at a given horizon, analysts' forecasts for large firms are superior to those of small firms. More specifically, Capstaff *et al.* (1995) find that UK analysts, like their US counterparts, generally over-react to earnings-related news across the whole market size spectrum. This tendency, however, is more pronounced for small companies. Analysts' forecasts of smaller firms appear to impound even less earnings related information and are generally more over-optimistic and overstated than equivalent forecasts for large firms. Unfortunately the extent of the differences in the forecast bias and efficiency for small firms is not known as this study does not provide detailed statistical evidence on this issue. It is not also clear whether the biases in small companies forecasts are consistent across different forecast horizons. Moreover, the Capstaff *et al.* (1995) study is based on the period February 1987 to December 1990. This is a period with relatively narrow coverage for UK small companies in the I/B/E/S universe and it spans over August 1988, the month that has been identified as the turning point for the performance of small companies in UK.

The preliminary investigation on analyst forecasts is based on a longer time period — January 1987 to March 1998 — and covers the entire universe of I/B/E/S forecasts for UK companies, ie an average of about 1,300 companies per year. The evidence provides some relevant insights to the small companies performance record in recent years.

Figures 7 and 8 show that analysts' forecasts in general are optimistic and inefficient; this is particularly pronounced for longer (6–12 months) investment horizons. In fact, for shorter investment horizons, analysts' forecasts for large companies appear to be pessimistic.

The extent of the over-optimism varies across the 10-year period of the analysis. The bias in forecasts is particularly pronounced during the recession in the early 1990s, suggesting that analysts were rather slow to grasp the implications of the economic downturn for corporate profitability.

Analyst forecasts are particularly biased for small companies in general and during the recession period in particular. The

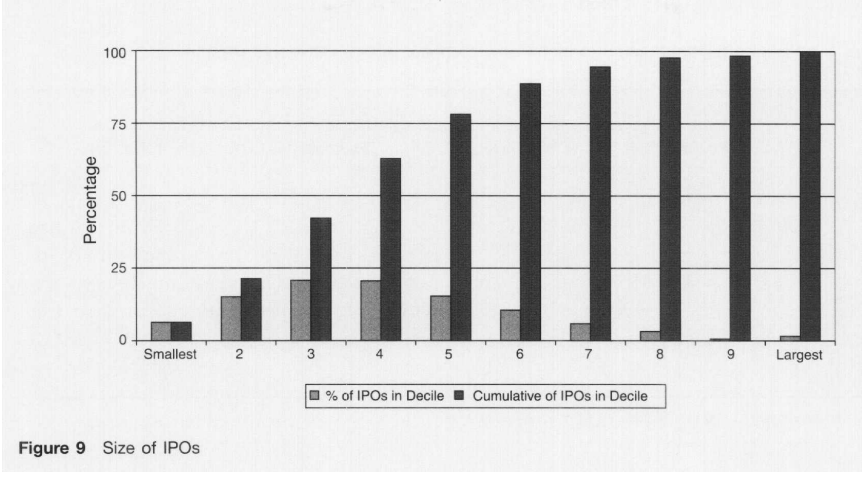

Figure 9 Size of IPOs

evidence suggests a monumental failure by analysts to adjust their expectations for small companies at the end of the 1980s and beginning of the 1990s.

There are significant differences in error forecasts across different industries. It is interesting to note that the largest forecast errors are found in technology stocks, health and household products, while the lowest are in financials and utilities. The mapping of industry loading across small and large stocks and forecast errors is pointing to an obvious pattern, but further analysis is necessary before drawing any definite conclusions.

Table 6 shows that the impact of earnings surprises, both positive and negative, on subsequent stock prices is markedly larger for small companies. The sharp reversal in the small firms performance in 1989 and 1990 are directly related to the huge negative earnings surprises observed for this group of companies at the time.[31]

Support for the over-reaction argument is offered from a surprisingly different stream of literature as well. A number of studies[32] in the USA and UK document significant long-run market and operating underperformance for initial public offerings (IPOs) and seasoned equity offerings. IPOs in the UK, for example, appear to underperform seasoned firms by an average of about 12 per cent in the three years following their initial listing. Figure 9 shows that, during the period 1980–88, about 98 per cent of the IPOs belonged to the first nine size deciles at the time of their listing. Although it may be tempting to infer an association between long-run underperformance of IPOs and small cap underperformance, it is worth bearing in mind that the period 1980–88 was overall a period of good performance for small companies. There is another important piece of evidence, however, that appears to be relevant. In the four-year period 1985–88, there was an unprecedented growth in IPO activity in the London market; a total of 477 new issues were listed in the Main and now defunct Unlisted Securities Markets. In the same four-year period, the London market also experienced a burst of seasoned equity offerings.[33] Levis (1995b) reports a record number of 823 seasoned equity offerings during this period. Thus, it appears that in the three years leading to turning point for the performance of small companies the London market was enduring a glut of

equity issuing activity involving a disproportional number of small to medium-size firms.

The reversal of the size effect is not due to the long-run underperformance of IPO and SEOs. Nevertheless, it is worth noting that Loughran (1993) finds that of the 5.7 per cent difference in returns between NYSE and NASDAQ stocks in the first five deciles (based on NYSE ranking), 60 per cent is due to the poor (long-run) performance of IPOs on NASDAQ. A difference of 2.3 per cent remains after purging NASDAQ returns of an IPO effect; IPOs are much more heavily concentrated on NASDAQ than on NYSE. The link between the size effect and issuing activity lies in the earnings forecasts for IPOs.

In their study of earnings forecasts for IPOs and their relation to long-run performance, Rajan and Servaes (1997) show that analysts are excessively over-optimistic about the earnings and growth performance of IPOs; this over-optimism is not just a reflection of a positive sentiment sweeping across the whole market. Moreover, firms with the highest growth projections at the time of the IPO substantially underperform various benchmarks, whereas firms with the lowest growth projections outperform these benchmarks. The difference in returns between the two extreme quartiles, in terms of growth projections, is more than 100 per cent. Rajan and Servaes (1997) argue that this evidence 'indicates that investors appear to believe the inflated long-term growth' (p. 509). Loughran and Ritter (1995) and Levis and Michailides (2001) for the UK also argue that firms take advantage of such 'windows of opportunity' to issue stock, while Lerner (1994) demonstrates similar patterns for privately held venture-backed biotechnology firms. The high expectations for future earnings growth appears to be fuelled by strong pre-listing performances of these companies. Jain and Kini (1994) analyse the earnings performance of IPO firms. They show that these firms perform very well prior to the IPO, but very poorly afterwards.

In short, there are some good grounds for believing that the reversal of the size effect is related to the issuing activity. If new companies are searching for windows of opportunity to come to the market, their valuations are likely to be optimistic at the time of the flotation and are adjusted downwards when their true potential becomes better understood. The tendency of IPOs and SEOs to populate the small size groupings, stacks heavy odds against the long-term performance of these companies.

Conclusions

The long history of strong outperformance by small cap stocks in the UK ended in the late 1980s. Since then, their average performance has lagged significantly behind their largest counterparts. The size effect is not entirely independent of other firm characteristics such as price-earnings rating, book-to-price ratio and price. It goes through long cycles, which broadly correspond to the general economic cycles, but this cyclical pattern of the size effect was broken in recent years. Tests of conditional asset-pricing models suggest that small firms have different sensitivities to the risk factors determining stock prices. Small firms, for example, are more likely to be adversely affected by unexpected increases in inflation and deterioration in credit conditions. Thus, conventional risk measures (betas) fail to reflect the inherent risks of small firms. Such firms are, however, riskier in terms of higher mortality, lower liquidity, higher short-term borrowings and higher volatility of earnings.

The positive size effect in the 1980s is associated with strong underlying growth in the corresponding earnings of small firms. Although the average earnings growth performance of small firms remained quite robust in the second part of the 1990s, their intra-group volatility increased markedly. The earnings growth of the small cap sector appears to be driven by a relatively small number of companies in this sector. Although there are some differences in market and earnings growth performance across different sectors, the apparent size effect cannot be accounted for by sectoral differences. The analysts' earnings forecasts for small firms are consistently more optimistic than equivalent forecasts for large firms.

The reversal of the size effect may also be associated with large volumes of equity issuing activity. Large volumes of equity issuance activity are associated with high initial prices resulting from over-optimistic prices. Price over-optimism is associated with subsequent long-term underperformance.

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Notes

1 Size interactions with other portfolio formation procedures such as price-earnings ratio, dividend yield and price. For UK evidence on these issues see Levis (1989a).
2 See, for example, Fouse (1989).
3 For a review of the evidence and explanations see Jacobs and Levy (1989), Dimson and Marsh (1989), Dimson and Marsh (1999a) and Hawawini and Keim (1999).
4 See for example, Clive Wolman, 'Thinking Small Can Bring Big Benefits', *Financial Times*, 22nd June, 1985, and Barbara Elis, 'When It Pays to Think Small', *Guardian*, 7th June, 1986.
5 Extel Small Companies Sector Survey 1998.
6 Almost identical results are obtained for the NASDAQ market on its own.
7 See Levis and Steliaros (1999).
8 Speidell and Graves (1998) report a similar pattern of underperformance for small firms across other European and emerging equity markets in recent years.
9 It should be noted that the Fama and French (1988) approach suffers from various econometric problems. The most obvious one arises from the use of overlapping observations in their regressions, which ultimately results in biased regression coefficients. Although they attempt to correct this bias by using a Monte Carlo approach, it is difficult to ascertain to what extent their results are biased owing to the autocorrelation of overlapping returns. Similar results are obtained, however, by Campell *et al.* (1997) using variance ratio tests.
10 The results are based on Levis and Kalliontzi (1993).
11 They classify a restrictive policy environment as a period of increases in Fed discount rates and an expansive one as a period of declines in discount rates.
12 Their approach is based on the standard arbitrage model developed by Chen *et al.* (1983).
13 Taylor and Poon (1991) and Clare and Thomas (1994) are the two known exceptions of unconditional factor models for the UK. Their results are rather ambivalent owing to short time periods and limited data sets.
14 In the absence of a precise asset pricing theory, a number of other economic variables were also tested; they include changes in the exchange rate, monthly changes in retail sales and the CBI confidence indicator.
15 Similar results are documented by Levis (1985), Corhay *et al.* (1987) and Strong (1996).
16 Berk (1995b) argues that the negative relation between market value and return stems directly from the theoretical inverse relation between market value and risk. Accordingly, the size effect should not be regarded as an anomaly.
17 Chan and Chen (1991) define leverage as the ratio of the sum of the book value of current liabilities, long-term debt and preferred stock over the market value of equity as of the end of the previous year.
18 See, for example, Levis (1989b).
19 Extel Small Companies Sector Survey 1998.
20 Market impact is the price dislocation caused by demand for liquidity beyond the size prevailing at the current bid and offered prices. Opportunity costs refer to the costs of unexecuted trades represented by unused cash.
21 Lucas (1977) considers the cyclicality of corporate earnings as one of the seven main features of macroeconomic fluctuations.
22 Although earnings play a key role in understanding the cross-sectional behaviour of stock returns, Lev (1989) argues that they explain only a small percentage (less than 10 per cent) of the contemporaneous change in stock prices.
23 Levis (1987), for example, demonstrates that size is not a determining factor in Investment Trusts performance during the period 1957–80.
24 Bryan *et al.* (1998), on the basis of their analysis of

100 international firms, argue that market-to-book ratios are related more directly to returns on book equity than earnings growth

25 See, for example, Fried and Givoly (1982) and Brous (1992).

26 See Lakonishok *et al.* (1994) and La Porta (1996).

27 See Barry and Brown (1984).

28 For evidence on the superiority of analysts' forecasts over time series forecasts see Brown *et al.* (1987) and Kross *et al.* (1990).

29 According to *The Economist* (1998), fund managers such as Scroders and Fidelity consider smaller companies as 'their most promising hunting ground' (12th December, p. 109).

30 Foster *et al.* (1984) define unexpected earnings (forecast error) using a time series model based on historical earnings rather than analysts' forecasts.

31 See Levis and Liodakis (1999).

32 See, for example, Levis (1993, 1995a), Levis and Gerbich (1999) and Levis and Thomas (1995) for the UK, and Ritter (1991) and Loughran and Ritter (1995, 1997) for the US.

33 See Ritter (1984) for a graphical illustration of 'hot issue' markets.

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Equity and the small-stock effect
Annin, Michael
Public Utilities Fortnightly; Oct 15, 1995; 133, 19; ABI/INFORM Global
pg. 42

Financial News

By Michael Annin

Equity and the Small-Stock Effect

The capital asset pricing model shows risk inherent in return on equity. But something goes wrong when it's used for small-sized companies.

Does the size of a company affect the rate of return it should earn? If smaller companies should earn a higher return than larger firms, then small utilities, because of their size, should be allowed to adjust the rates they charge to customers.

By far the most notable and well-documented apparent anomaly in the stock market is the effect of company size on equity returns. The first study focusing on the impact that company size exerts on security returns was performed by Rolf W. Banz. Banz sorted New York Stock Exchange (NYSE) stocks into quintiles based on their market capitalization (price per share times number of shares outstanding), and calculated total returns for a value-weighted portfolio of the stocks in each quintile. His results indicate that returns for companies from the smallest quintile surpassed all other quintiles, as well as the Standard & Poor's 500 and other large stock indices. A number of other researchers have replicated Banz's work in other countries; nevertheless, a consensus has not yet been formed on why small stocks behave as they do.

One explanation for the higher returns is the lack of information on small companies. Investors must search more diligently for data. For small utilities, investors face additional obstacles, such as a smaller customer base, limited financial resources, and a lack of diversification across customers, energy sources, and geography. These obstacles imply a higher investor return.

The Flaw in CAPM

One of the more common cost of equity models used in practice today is the capital asset pricing model (CAPM). The CAPM describes the expected return on any company's stock as proportional to the amount of systematic risk an investor assumes. The traditional CAPM formula can be stated as:

$$R_s = [\beta_s \times RP] + R_f$$

where:

- R_s = expected return or cost of equity on the stock of company "s"
- β = the *beta* of the stock of company "s"
- RP = the expected equity risk premium
- R_f = expected return on a riskless asset.

Table 1: The Size Premium in CAPM
(By Decile Portfolio in NYSE, 1926-94)

Decile	*Beta*	Arithmetic Mean Return	Actual Return in Excess of Riskless Rate**	CAPM Return in Excess of Riskless Rate**	Size Premium (Return in Excess CAPM)
1	0.90	11.01%	5.88%	6.33%	–0.44%
2	1.04	13.09	7.97	7.34	0.63
3	1.09	13.83	8.71	7.70	1.01
4	1.13	14.44	9.32	7.98	1.33
5	1.17	15.50	10.38	8.22	2.16
6	1.19	15.45	10.33	8.38	1.95
7	1.24	15.92	10.79	8.75	2.05
8	1.29	16.84	11.72	9.05	2.67
9	1.36	17.83	12.71	9.57	3.14
10	1.47	21.98	16.86	10.33	6.53

**Betas* are estimated from monthly returns in excess of the 20-year government bond income return, January 1926-December 1994.
**Historical riskless rate measured by the 69-year arithmetic mean income return component of 20-year government bonds.
Source: SBBI 1995 Yearbook

Financial News

Table 2: CAPM vs. CAPM w/ Size Premium

(By Percentile for Electric, Gas, and Sanitary Services Utilities)

	CAPM	CAPM with Size Premium
90th Percentile	16.42%	18.92%
75th Percentile	12.56%	14.72%
Median	10.89%	12.58%
25th Percentile	9.86%	11.39%
10th Percentile	8.63%	10.65%

(Weighted by Market Capitalization)

	CAPM	CAPM with Size Premium
Industry Composite	11.76%	12.33%
Large Company Composite	12.05%	12.07%
Small Company Composite	13.93%	17.95%

Source: Cost of Capital Quarterly '95 Yearbook by Ibbotson Associates
Note: Public utilities include electric, gas, and sanitary services companies.

Table 1 shows *beta* and risk premiums over the past 69 years for each decile of the NYSE. It shows that a hypothetical risk premium calculated under the CAPM fails to match the actual risk premium, shown by actual market returns. The shortfall in the CAPM return rises as company size decreases, suggesting a need to revise the CAPM.

The risk premium component in the actual returns (realized equity risk premium) is the return that compensates investors for taking on risk equal to the risk of the market as a whole (estimated by the 69-year arithmetic mean return on large company stocks, 12.2 percent, less the historical riskless rate). The risk premium in the CAPM returns is *beta* multiplied by the realized equity risk premium.

The smaller deciles show returns not fully explainable by the CAPM. The difference in risk premiums (realized versus CAPM) grows larger as one moves from the largest companies in decile 1 to the smallest in decile 10. The difference is especially pronounced for deciles 9 and 10, which contain the smallest companies.

Based on this analysis, we modify the CAPM formula to include a small-stock premium. The modified CAPM formula can be stated as follows:

$R_s = [\beta_s \times RP] + R_f + SP$

where:

SP = small-stock premium.

Because the small-stock premium can be identified by company size, the appropriate premium to add for any particular company will depend on its equity capitalization. For instance, a utility with a market capitalization of $1 billion would require a small capitalization adjustment of approximately 1.3 percent over the traditional CAPM; at $400 million, approximately 2.1 percent, and at only $100 million, approximately 4 percent.

Again, these additions to the traditional CAPM represent an adjustment over and above any increase already provided to these smaller companies by having higher *betas*.

Implications for Smaller Utilities

These findings carry important ramifications for relatively small public utilities. Boosting the traditional CAPM return by a full 400 basis points for small utilities translates into a substantial premium over larger utilities.

Table 2 shows the results of an analysis of 202 utility companies that calculated cost of equity figures. Composites (arithmetic means) weighted by equity capitalization were also calculated for the largest and smallest 20 companies. The results show the impact size has on cost of equity.

For the traditional CAPM, the large-company composite shows a cost of equity of 12.05 percent; the small company composite, 13.93 percent. However, once the respective small capitalization premium is added in, the spread increases dramatically, to 12.07 and 17.95 percent, respectively. Clearly, the smaller the utility (in terms of equity capitalization), the larger the impact that size exerts on the expected return of that security. ▼

Michael Annin, CFA, is a senior consultant with Ibbotson Associates, specializing in business valuation and cost of capital analysis. He oversees the Cost of Capital Quarterly, *a reference work on using cost of capital for company valuations.*

Energy Industry Research

Electric Utilities Quarterly 4Q10

4Q10 Earnings Mixed, FY10 Solid Earnings Growth

Near Term, We Believe the Sector Exhibits Increased Regulatory Risk Buffered by Stable Yields; Nuclear Industry Facing Challenges in 2011

Long Term, We Believe the Sector Is Poised for a Return to Stable Earnings Growth with Economic Recovery

March 2011

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KeyBanc Capital Markets

For important disclosures and certifications, please refer to page 54 of this document.

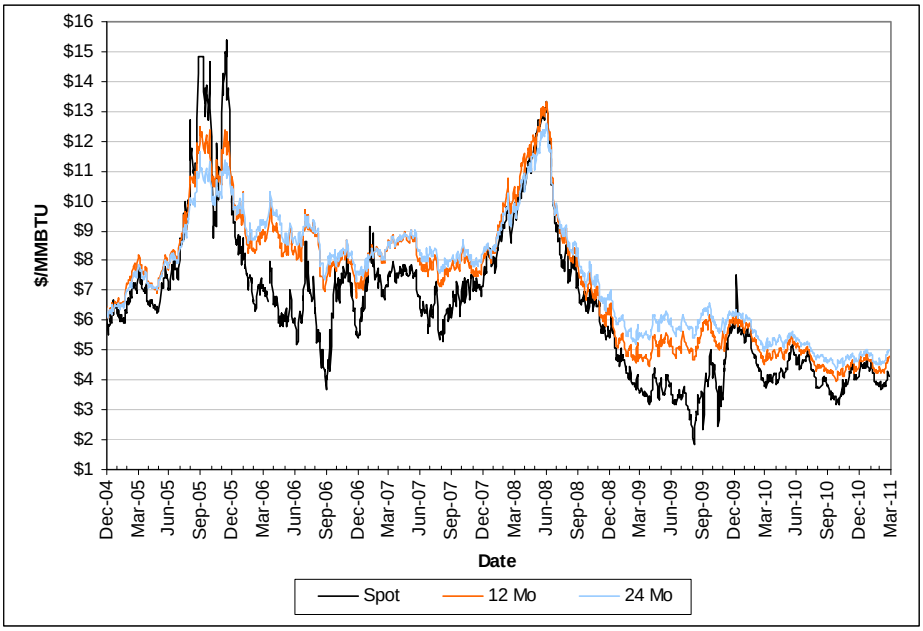
INDUSTRY THEMES

RETREATING COMMODITY PRICES AND AVAILABLE CAPACITY HEAT UP COMPETITION

Natural gas pricing, having come off of volatile summer 2008 highs, continues to drive the marginal clearing price of power in wholesale markets (see Chart 4). Given the political firestorms that followed rate freeze expirations in Maryland and Illinois, we believe investors should continue to monitor the transition to competitive markets in Ohio and Pennsylvania. Given available capacity and the sharp decline in wholesale power pricing as natural gas prices remain low, we remain concerned over the potential for competitive marketers to undercut pricing, given that supply for the period when these utilities step to market had been partially procured during periods of significantly higher pricing. We believe marketers could lock in supply at current pricing to offer customers a more attractively priced alternative.

Chart 4. Comparison of Spot, 12-Month and 24-Month Natural Gas Prices

(December 31, 2004 – March 25, 2011)



Source: Bloomberg

2010 MID-TERM ELECTION RESULTS

With the 2010 mid-term elections concluded, many states now have new governors, legislators and regulators taking office. Overall, we continue to follow how any state election outcome (particularly shifts in power) could impact a coverage list name in its states of operation and whether there are any potential regulatory, environmental or capital spending impacts to the company and its shareholders. We believe as the political tone has moved decidedly to the right, the level of support for state-level renewable energy standards bears watching.

On a federal level, given the shift in the Senate and change in power in the House of Representatives, we believe that the passing of any major comprehensive energy legislation under the new Congress is rather unlikely (carbon cap-and-trade, climate change or a national renewable energy portfolio standard). We do believe there might be renewed attempts in Congress to legislate, restrict or delay EPA authority to regulate greenhouse gases, although overriding a Presidential veto would prove difficult. Meaningful uncertainty remains around how aggressively these regulations will be implemented, and we believe the dynamic of how the next Congress, the EPA and the industry work together is something to watch.

BARCLAYS CAPITAL

EQUITY RESEARCH

14 July 2011

POWER & UTILITIES

The Seventh Inning Stretch

We remain 1-Positive on the U.S. Utilities group, and see the fundamentals from our initial upgrade persisting. However, we feel that it is prudent for investors to be more selective in their exposure as trends begin to shift over the next 6-12 months. In 2010's "Capital Appreciation" regulated review, we highlighted a bias towards mid-cap regulated stocks which in the last 12 months have returned 30% on a total return basis, versus 25% for the S&P 500. This year, we focus on stocks trading at a meaningful discount due to uncertain regulatory overhangs, which we believe will be resolved constructively. We think these present the best opportunities for regulated stock outperformance over the next 6-12 months.

Trends stay intact for now: Regulated utilities continue to trade at a 6.2% discount to Baa corporate bonds. We believe positive investor fund flows, a lower regulatory risk environment, and low external equity needs continue to present a constructive backdrop. We see risk increasing, however, as we approach 2013. Ramping environmental spend, heightened rate case activity, the end of bonus depreciation, and the need for greater external financing all serve as factors in this analysis.

Strategies for late in the game: We are highlighting some our favorite 1-OW names that all trade at a discount to peers due to regulatory activity that we believe will ultimately be resolved constructively. They are AEP, EIX, NGG, and NVE. We provide a brief thesis for each in the following pages.

Inside "The Seventh Inning Stretch," we lay out our new commission rankings, updated capex schedules, and a synopsis of current rate cases for our coverage companies. In addition, we update our analysis of relative valuation, financing needs, and regulatory trends.

SECTOR UPDATE

U.S. Utilities
1-POSITIVE
Unchanged

For a full list of our ratings, price target and earnings changes in this report, please see table on page 2.

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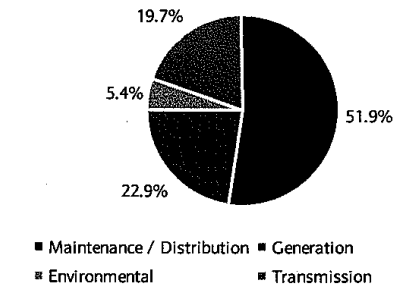
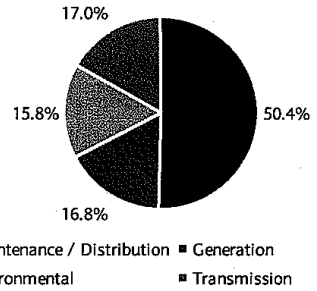
Figure 13: 2011 Capex Forecast by Type



Source: Company filings, Barclays Capital estimates

Figure 14: 2011-2015 Capex Forecast by Type



Source: Company filings, Barclays Capital estimates

The breakdown of spending by type is indicated above. It is largely consistent with recent trends. In general, we're seeing capex levels persistently at 2x depreciation for the industry, which is illustrated in Figure 15.

Figure 15: Rate Base Growth Projections ($ in millions)

	2009	2010	2011E	2012E	2013E	2014E	2015E
Rate Base	$489,964	$516,130	$547,799	$556,054	$573,912	$615,337	$655,008
Capital Expenditures	$58,186	$60,066	$65,451	$68,837	$77,911	$78,829	$79,585
D&A	$25,184	$28,398	$57,196	$50,978	$36,486	$39,159	$41,862
Rate Base Additions	$33,003	$31,668	$8,255	$17,859	$41,425	$39,671	$37,723
Rate Base Growth %	7.3%	6.5%	1.6%	3.3%	7.4%	6.9%	6.1%

Note: Figures reflect Barclays Capital utility coverage scaled up by a factor of 1.08x to reflect companies not in our coverage universe.
Source: Company filings, Edison Electric Institute, Barclays Capital estimates

Spending grows from approximately $60 billion to $80 billion over our forecast period, as we remain pretty solidly in the middle of the industry's investment cycle. Rate base growth is reduced in 2011 and 2012 due to the impact of bonus depreciation. Although we treat this benefit as a one-time item for company modeling purposes, we wanted to reflect the impact here to show the reduction in rate base growth, and, as shown in Figure 16 below, the reduced need for external equity to fund growth.

Including the effect of bonus depreciation, we expect pre-dividend free cash flows to post a modest $1.6 billion deficit in 2011, growing to a $7.3 billion deficit in 2012. On a more normalized basis, we expect pre-dividend free cash deficits of $12 billion-$20 billion for the group once bonus D&A expires. Including dividends, we see a dip in the FCF deficit to $19 billion in 2011, and resuming to more normalized capital-cycle levels of $35 billion-$39 billion in the out years of our model.

STANDARD &POOR'S

Global Credit Portal®
RatingsDirect®

January 10, 2012

Industry Economic And Ratings Outlook:

U.S. Regulated Gas And Water Utilities' Credit Quality Should Remain Stable In 2012

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Table Of Contents

Industry Economic And Ratings Outlook:

U.S. Regulated Gas And Water Utilities' Credit Quality Should Remain Stable In 2012

The 2012 outlook for credit quality in the U.S. gas and water utility sectors will likely remain stable. While Standard & Poor's Ratings Services expects the U.S. economy to remain weak, we see little movement in regulated gas and water utilities' credit risk profiles during periods of economic change. The essential services that both sectors provide and the rate-regulated nature of their businesses allow them to generate stable cash flows and recover their costs even when the economy is weak.

Economic Outlook

Standard & Poor's base-case 2012 outlook for the U.S. gas and water utility sectors is stable, based on the following fundamentals:

- Weak economic fundamentals characterized by only modestly positive GDP growth, high unemployment, and weak consumer spending;
- Despite the economic headwinds, gas and water usage patterns should remain stable; and
- Solid liquidity and capital markets access for the sectors.

Effects on ratings

At the end of 2011, about 85% of the U.S. gas utilities that we rate had stable outlooks—somewhat improved from the previous quarter. The year-end improvement in outlooks reflected our Dec. 15, 2011, rating actions on AGL Resources Inc. and Nicor Inc. and their related subsidiaries following the close of their merger. At that time we removed the ratings from CreditWatch with negative implications, lowered the ratings to 'BBB+' from 'A-', and assigned a stable outlook. (We withdrew our ratings on Nicor Inc. following the merger. See table 2 for more information.).

However, outlooks for the U.S. water utilities we rate have experienced a negative trend. We maintained negative outlooks on nearly 20% of the water utilities we rate at the end of 2011 versus the prior quarter when all water utilities had stable outlooks. We recently revised outlooks on Connecticut Water Service Inc., its subsidiary, Connecticut Water Co., and California Water Service Co. due to credit metrics that we consider to be strained for their respective ratings.

Residential and commercial natural gas consumption is generally stable, depending on the severity of winter weather, with mild customer conservation typically somewhat offsetting incremental usage. For instance, natural gas consumption continues to inch up (by about 4% for the year-to-date period through October 2011 versus year-to-date October 2010), although heating degree days were up about 3% for the comparable period. Thus the increase in view of winter weather conditions is minimal. We expect water consumption, which is generally aligned with population and household growth, to increase, but only minimally in 2012. Modest changes in gas and water consumption, however, have little effect on credit quality for U.S. investor-owned gas and water utilities. Supportive regulatory mechanisms--such as revenue decoupling and straight-fixed-variable rate designs--ensure that utilities generate relatively stable cash flows regardless of usage fluctuations. On the margin, lower natural gas prices, like

those currently exhibited, are supportive of credit quality because working capital requirements are lower. None of the rated gas utilities have direct commodity price exposure, because they pass the gas prices along to the consumer. Therefore, Standard & Poor's base case 2012 outlook for both industries is stable.

Our economists are forecasting baseline GDP growth in the U.S. to average 1.8% in 2012, unchanged from 2011. We expect housing starts (about 670,000) to be up about 10% in 2012 from those expected in 2011 and will generally help to slowly increase customer connections to the utilities. We also expect unemployment to remain high at about 9% in 2012, unchanged from the 2011 estimate. Utility cash flows should remain flat in this scenario. Revenue growth will be limited, but at the same time companies will have low capital spending due to the limited new customer connections.

In our view, a weaker economy can have a much greater effect on a gas utility's nonregulated businesses, such as wholesale trading, retail marketing, and merchant gas storage operations. Indeed, many companies have seen their unregulated subsidiaries underperform in 2011 and we do not see signs that this situation will notably change in 2012. In our forecasts, we typically cut our estimates of these businesses' cash flow contributions to accommodate this possibility. In the gas storage and wholesale trading businesses, for example, low absolute prices and low price volatility limit companies' ability to generate cash flow. Low gas prices, however, do promote more opportunities for gas heating conversions and lessen working capital use for the regulated gas utility segment. When utilities use debt to ramp up their investments in these businesses, credit quality can suffer because overall cash flows become more volatile. The size and degree of credit risk created by nonregulated businesses on the water utilities' credit profile is minimal.

Table 1

Standard & Poor's Economic Scenarios, December 2011

		--2011--									
	Q4 2010	Q1	Q2	Q3	Q4e	Q1e 2012	2009	2010	2011e	2012e	2013e
(% change)											
Real GDP	2.4	0.4	1.3	2.0	2.9	1.5	(3.5)	3.0	1.8	1.8	2.5
Consumer spending	3.6	2.1	0.7	2.3	2.7	1.8	(1.9)	2.0	2.3	2.2	1.9
Equipment investment	8.1	8.7	6.2	15.6	5.8	4.5	(16.0)	14.6	10.2	6.8	7.4
Nonreseidential construction	10.5	(14.3)	22.6	12.6	4.8	1.0	(21.2)	(15.8)	4.7	1.8	(0.2)
Residential construction	2.4	(2.6)	4.2	1.5	1.3	3.2	(22.5)	(4.6)	(2.1)	4.0	18.4
Federal government	(3.0)	(9.4)	1.9	1.9	(4.9)	(3.5)	6.0	4.5	(1.8)	(2.8)	(3.6)
State and local government	(2.7)	(3.3)	(2.8)	(1.4)	(2.5)	(3.1)	(0.9)	(1.8)	(2.2)	(2.5)	(0.8)
Exports	7.8	7.9	3.6	4.3	3.8	2.7	(9.4)	11.3	6.7	3.5	7.6
Imports	(2.3)	8.3	1.4	0.5	1.3	4.0	(13.6)	12.5	4.7	2.6	3.4
CPI	2.6	5.2	4.1	3.1	1.0	1.1	(0.3)	1.7	3.2	1.5	1.7
Core CPI	0.6	1.7	2.5	2.7	1.5	1.4	1.7	1.0	1.7	1.6	1.7
Nonfarm unit labor costs	(1.6)	6.2	(0.1)	(2.5)	0.3	2.3	(0.7)	(2.0)	1.0	1.1	1.9
Nonfarm productivity	2.2	(0.6)	(0.1)	2.3	2.0	1.0	2.3	4.1	1.0	1.1	1.0
(Levels)											
Unemployment rate (%)	9.6	8.9	9.1	9.1	9.0	9.0	9.3	9.6	9.0	9.0	8.7
Payroll employment (mil.)	130.1	130.5	131.0	131.3	131.7	132.0	130.8	129.8	131.1	132.7	134.8
Federal funds rate (%)	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.0

Table 1

Standard & Poor's Economic Scenarios, December 2011 (cont.)											
10-Yr. Treasury note yield (%)	2.9	3.5	3.2	2.4	2.1	2.1	3.3	3.2	2.8	2.3	2.8
'AAA' corporate bond yield (%)	4.9	5.1	5.0	4.5	3.9	4.0	5.3	4.9	4.6	4.2	4.5
Mortgage rate (30-year conventional) (%)	4.4	4.9	4.7	4.3	4.0	3.9	5.0	4.7	4.5	4.0	4.3
Three-month T-Bill rate (%)	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.0	0.0
S&P 500 Index	1,204.0	1,302.7	1,319.0	1,228.1	1,231.2	1,264.7	946.7	1,139.3	1,270.3	1,328.9	1,443.4
S&P operating earnings ($/share)	21.9	22.6	24.9	25.3	26.2	25.1	56.9	83.8	98.9	105.4	113.4
Current account ($ bil.)	(449.0)	(478.0)	(472.0)	(414.0)	(435.0)	(453.0)	(377.0)	(471.0)	(450.0)	(467.0)	(435.0)
Exchange rate (major trade partners)	87.0	85.7	83.0	83.2	85.6	87.4	92.6	89.8	84.4	87.6	85.6
West Texas Intermediate crude price ($/barrel)	85.0	94.0	102.6	89.7	91.0	87.3	61.7	79.4	94.3	86.3	103.3
Savings rate (%)	5.2	5.0	4.8	3.8	3.6	3.9	5.2	5.3	4.3	3.7	2.8
Housing starts (mil.)	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	1.0
Unit sales of light vehicles (mil.)	12.3	13.0	12.1	12.4	13.3	13.1	10.4	11.6	12.7	13.3	14.8
Federal surplus (fiscal year unified, bil. $)	(369.0)	(460.0)	(141.0)	(325.0)	(327.0)	(396.0)	(1,416.0)	(1,294.0)	(1,296.0)	(1,047.0)	(775.0)

Forecasts are from the Dec. 12, 2011, "U.S. Economic Forecast: As Good As It Gets?" published on RatingsDirect. e--Estimate. CPI--Consumer price index.

At Standard & Poor's, we publish monthly our economists' scenario of where we think the U.S. economy could be heading. Beyond projecting GDP and inflation, we also include outlooks for other major economic categories. We call this forecast our "baseline scenario," and we use it in all areas of our credit analyses.

However, we realize that financial market participants also want to know how we think the economy could worsen--or improve--from our baseline scenario. Any point-in-time forecast of the economy will be wrong; it is simply a question of how far wrong. As a result, we now project two additional scenarios, one upside and one downside. We set these scenarios approximately at one standard deviation from the base line (roughly the 20th and 80th percentiles of the distribution of possible outcomes). We use the downside case to estimate the credit impact of an economic outlook weaker than the expected case.

Industry Credit Outlook

Regulation smoothes cash flows and supports cost recovery

State regulation will continue to influence gas and water utility credit ratings in 2012. Many recent regulatory developments have been positive for credit quality. Commissions are increasingly putting into place rate mechanisms that insulate utilities from economic trends whereby the health of the overall economy is less of a factor for credit quality. In the water industry, for instance, we expect the New Jersey Board of Public Utilities to approve in 2012 the implementation of a distribution system investment charge (DSIC) mechanism. While average returns on equity have gone down slightly, several jurisdictions have granted enhanced rate-making mechanisms that help ensure greater cash flow stability. Most important are rate "decoupling" and straight-fixed-variable rate designs and the aforementioned DSIC mechanism. Rate decoupling protects a utility's financial performance when conservation leads to lower consumption because it essentially makes the utility whole by increasing customer charges to compensate for lower usage. The DSIC program, prevalent in the water sector, allows for rate increases for

nonrevenue-producing investments to replace aging infrastructure outside of general rate proceedings. We expect capital spending in the water sector to continue to go up due to a generally aging infrastructure and stringent water treatment and quality standards. The DSIC program mitigates the risk of cash flow lag, meaning that any revenue increases associated with today's capital spending would not need to wait until the next rate case.

Liquidity is also favorable

Liquidity is adequate for many gas and water utilities. Credit fundamentals indicate that most, if not all, gas and water utilities should continue to have ample access to funding sources and credit availability as banking syndicates are willing to negotiate credit facilities with longer terms. Some utilities are taking advantage of favorable capital markets access, strong investor appetite, and low interest rates to prefinance or extend debt maturities. Debt maturities in the gas and water sectors are relatively modest in 2012 and companies will likely refinance with new debt or with borrowings under their revolving credit facilities. Some companies have issued common stock to partially fund construction spending, which helps to balance the capital structure between debt and equity.

Stable Outlook Is Likely To Continue

Our outlook for the gas and water utility industries remains stable based on gradual economic recovery, generally supportive regulatory decisions (including mechanisms that allow for timely cost recovery), and adequate liquidity.

Chart 1

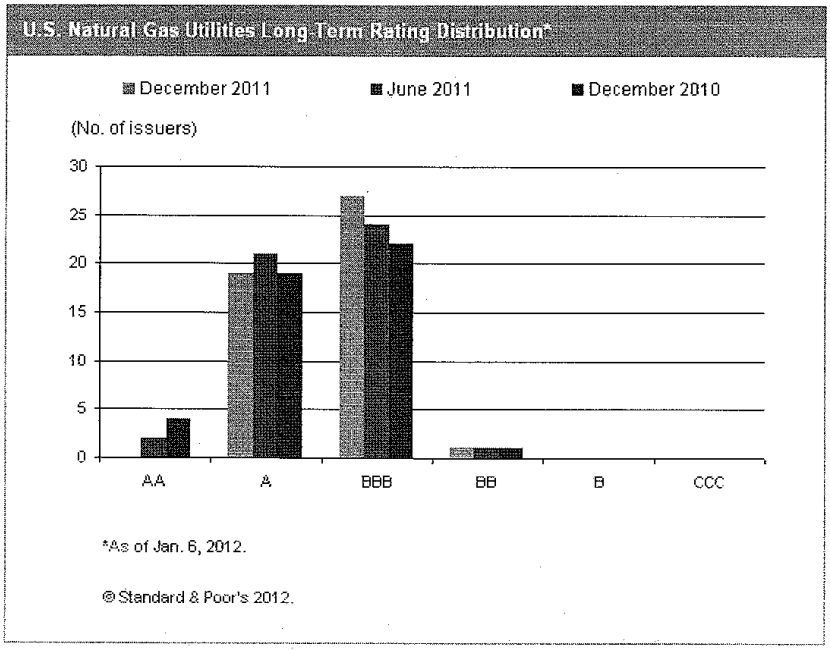

Chart 2

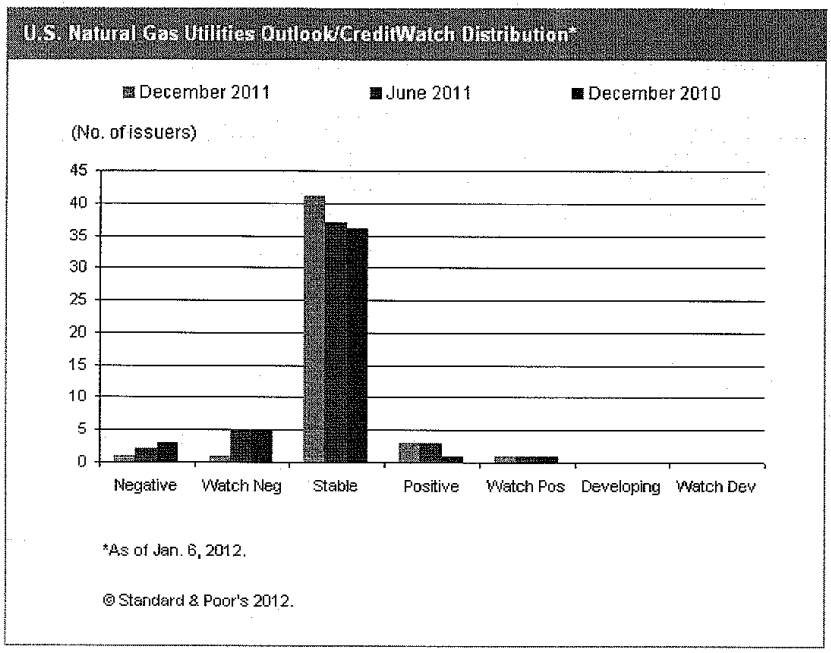
U.S. Natural Gas Utilities Outlook/CreditWatch Distribution*
December 2011
June 2011
December 2010
(No. of issuers)
45
40
35
30
25
20
15
10
5
0
Negative
Watch Neg
Stable
Positive
Watch Pos
Developing
Watch Dev
*As of Jan. 6, 2012.
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Chart 3

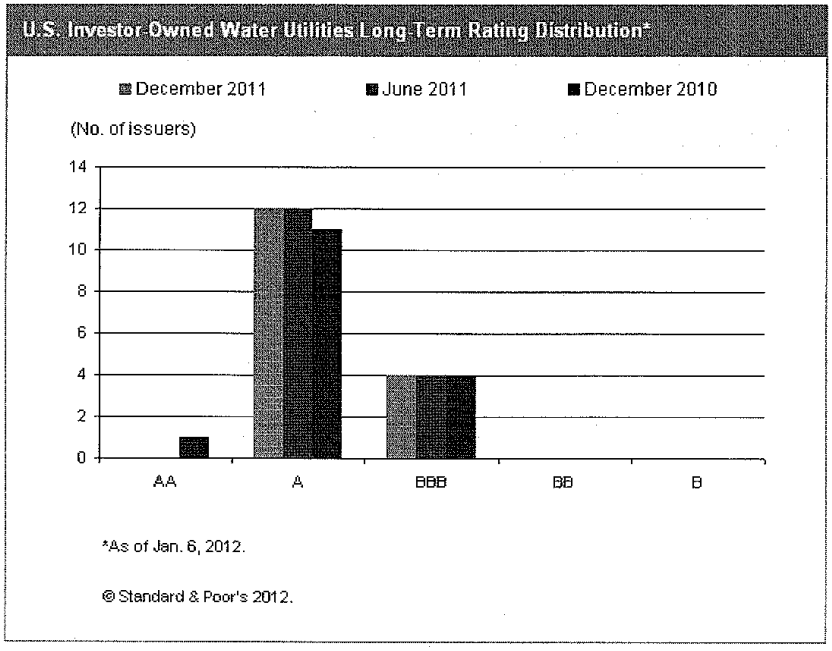
U.S. Investor-Owned Water Utilities Long-Term Rating Distribution*
December 2011
June 2011
December 2010
(No. of issuers)
14
12
10
8
6
4
2
0
AA
A
BBB
BB
B
*As of Jan. 6, 2012.
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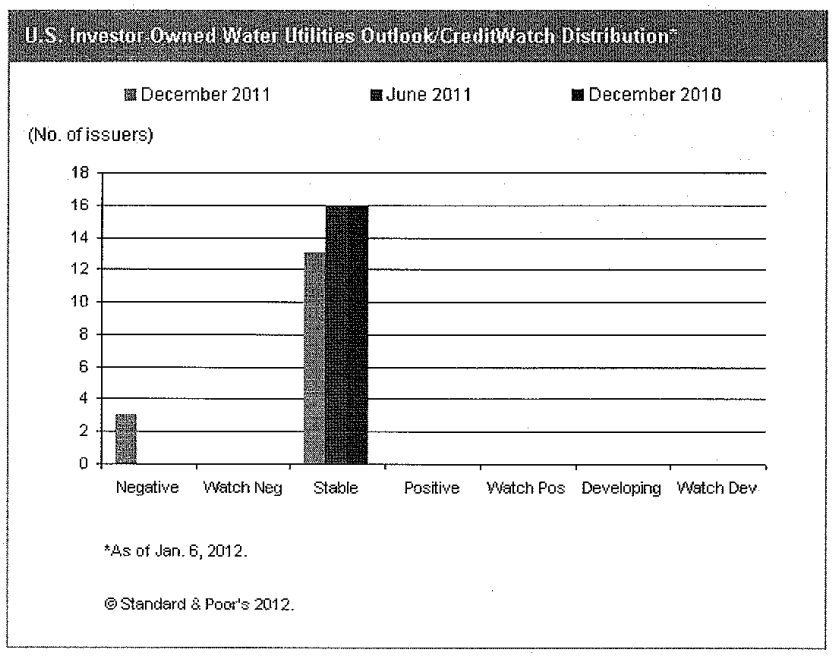
Chart 4



Recent Rating Activity

Table 2

Recent Natural Gas Utility Rating/Outlook/CreditWatch Actions*

Company	To	From	Date
AGL Resources Inc.	BBB+/Stable/A-2	A-/Watch Neg/A-2	Dec. 15, 2011
Atlanta Gas Light Co.	BBB+/Stable/A-2	A-/Watch Neg/--	Dec. 15, 2011
Nicor Inc.	Not rated	AA/Watch Neg/A-1+	Dec. 15, 2011
Nicor Gas Co.	Not rated	AA/Watch Neg/A-1+	Dec. 15, 2011

*Actions taken since the last report card dated Oct. 6, 2011.

Table 3

Recent Water Utility Rating/Outlook/CreditWatch Actions*

Company	To	From	Date
Connecticut Water Co. (The)	A/Negative/--	A/Stable/--	Oct. 28, 2011
Connecticut Water Service Inc.	A/Negative/--	A/Stable/--	Oct. 28, 2011
California Water Service Co.	A+/Negative/--	A+/Stable/--	Dec. 19, 2011

*Actions taken since the last report card dated Oct. 6, 2011.

Contact Information

Table 4

Contact Information--Gas Utilities

Credit analyst	Location	Phone	E-Mail
Manish Consul	New York	(1) 212-438-3870	manish_consul@standardandpoors.com
William Ferara	New York	(1) 212-438-1776	bill_ferara@standardandpoors.com
Michael Grande	New York	(1) 212-438-2242	michael_grande@standardandpoors.com
David Lundberg	New York	(1) 212-438-7551	david_lundberg@standardandpoors.com

Table 5

Contact Information--Water Utilities

Credit analyst	Location	Phone	E-Mail
Manish Consul	New York	(1) 212-438-3870	manish_consul@standardandpoors.com
William Ferara	New York	(1) 212-438-1776	bill_ferara@standardandpoors.com

Related Criteria And Research

- U.S. Economic Forecast: As Good As It Gets?, Dec. 12, 2011
- Issuer Ranking: U.S. Regulated Natural Gas Utilities, Strongest To Weakest, Oct. 7, 2011

Division 3-25-ELEC/GAS

Request:

For each company in Mr. Hevert's DCF proxy groups, please provide the percentage of each proxy company's operations considered to be regulated utility, using his selected metric.

Response:

Please refer to Attachment DIV 3-25-ELEC/GAS for the percentage of each proxy company's operations considered to be regulated electric and natural gas operations, respectively.

Prepared by or under the supervision of: Robert B. Hevert

		Regulated Electric Income / Total Reg. Income	Regulated Gas Income / Total Reg. Income
Narragansett Electric		76.12%	23.88%

Electric Group	Ticker	Regulated Electric Income / Total Reg. Income	Regulated Gas Income / Total Reg. Income
American Electric Power	AEP	100.00%	0.00%
Cleco Corp.	CNL	100.00%	0.00%
Edison International	EIX	100.00%	0.00%
First Energy Corp.	FE	100.00%	0.00%
Great Plains Energy Inc.	GXP	100.00%	0.00%
Hawaiian Electric	HE	100.00%	0.00%
IDACORP, Inc.	IDA	100.00%	0.00%
Integrys/WPS Resources	TEG	125.38%	-25.38%
Otter Tail Corp.	OTTR	100.00%	0.00%
Pepco Holdings, Inc.	POM	93.60%	6.40%
Pinnacle West Capital	PNW	100.00%	0.00%
Portland General	POR	100.00%	0.00%
Southern Co.	SO	100.00%	0.00%
Westar Energy	WR	100.00%	0.00%

Gas Group	Ticker	Regulated Electric Income / Total Reg. Income	Regulated Gas Income / Total Reg. Income
Atmos Energy	ATO	0.00%	100.00%
Laclede Group	LG	0.00%	100.00%
New Jersey Resources	NJR	0.00%	100.00%
Northwest Nat. Gas	NWN	0.00%	91.00%
Piedmont Natural Gas	PNY	0.00%	100.00%
South Jersey Industries	SJI	0.00%	100.00%
Southwest Gas	SWX	0.00%	100.00%
WGL Holdings Inc.	WGL	0.00%	100.00%

Combination Group	Ticker	Regulated Electric Income / Total Reg. Income	Regulated Gas Income / Total Reg. Income
Alliant Energy Corp.	LNT	88.50%	12.39%
Ameren Corp.	AEE	71.90%	28.10%
Avista Corp.	AVA	52.95%	47.05%
Black Hills Corp.	BKH	66.40%	33.60%
Center Point Energy	CNP	53.03%	20.78%
CH Energy Group	CHG	77.49%	22.51%
CMS Energy Corp.	CMS	71.36%	28.64%
Consolidated Edison	ED	79.59%	18.07%
DTE Energy Co.	DTE	77.61%	17.48%
PG&E Corp	PCG	54.55%	45.45%
SCANA Corp.	SCG	80.14%	19.86%
TECO Energy, Inc.	TE	84.61%	15.39%
Vectren Corp.	VVC	49.92%	50.08%
Wisconsin Energy	WEC	51.77%	48.21%
Xcel Energy, Inc.	XEL	83.81%	16.19%

Division 3-26-ELEC/GAS

Request:

Please provide Mr. Hevert's opinion regarding the relative business risk profiles of:

(a) electric utility distribution service;
(b) regulated electric generation supply;
(c) unregulated electric generation supply; and
(d) gas utility distribution service.

Response:

All else being equal, Mr. Hevert believes that vertically integrated electric utilities (or regulated companies with electric generation supply) are subject to operating risks to which transmission and distribution utilities may not be exposed. Similarly, unregulated electric generation supply poses incremental market and competition risks that do not typically exist for a regulated distribution and transmission utility, or even a vertically integrated electric distribution utility. Mr. Hevert believes that the risk of an entity is completely dependent upon its unique set of circumstances and Mr. Hevert would not employ the use of generalizations in assessing one company's risk profile relative to that of another company. Overall business risk is a function of multiple factors and must be considered on that basis.

Prepared by or under the supervision of: Robert B. Hevert

Division 3-27-ELEC/GAS

Request:

Please provide evidence of studies that Mr. Hevert is aware of or has considered that demonstrate that firm size is an important business risk factor specifically for utility companies. For example, this would include studies of company risk or cost of capital that employed a data base composed primarily or entirely of utility companies.

Response:

Mr. Hevert cited such a study on page 58, line 11 of his Direct Testimony. A copy of that study is provided as Attachment DIV 3-23-ELEC/GAS (beginning on page 47 of 62) to the Company's response to Division 3-23-ELEC/GAS.