BEFORE THE
STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

In the Matter of

National Fuel Gas Distribution Corporation
New York Division

Case 07-G-0141

June 2007

Exhibit Referred to in the
Prepared Testimony of:

Staff Rate of Return Panel

Hasan Ahmed
Senior Utility Financial Analyst

Audrey L. Capers
Principal Utility Financial
Analyst

Office of Accounting, Finance &
Economics
State of New York
Department of Public Service
Three Empire State Plaza
Albany, New York 12223-1350

National Fuel Gas Distribution Corporation
Staff's Hypothetical Capital Structure
for the Year Ending December 2008
Case 07-G-0141
($000)

	Amount Outstanding (000)	Percentage %		Cost Rate %		Weighted Cost %	Pre-tax Weighted Cost [5] %
Long Term Debt	$422,891	45.54%		6.57%	[1]	2.99%	2.99%
Short Term Debt	86,616	9.33%		5.67%	[2]	0.53%	0.53%
Customer Deposits	$7,320	0.79%		3.65%	[1]	0.03%	0.05%
Common Equity	411,883	44.35%	[3]	8.75%	[4]	3.88%	6.45%
Total Capital	$928,710	100.00%				7.43%	10.02%
Pretax interest coverage =							3.35 x

[1] Long term debt and preferred stock cost rates, as per testimony of Company Witness Bauer.
[2] Rate based on the average A2/P2 commercial paper rates for the month ended April 2007.
[3] Recommended common equity ratio per Rate of Return Panel (RRP) testimony.
[4] Recommended cost of common equity per RRP testimony.
[5] Assumed combined 35% federal income tax rate and 7.5% state income tax rate = 39.875%.

National Fuel Gas Distribution Corporation
Capital Structure for the Year Ending December 2008
(Per Company Witness Hanley)
Case 07-G-0141
($000)

	Amount Outstanding (000)	Percentage %	Cost Rate %		Weighted Cost %	Pre-tax Weighted Cost [4] %
Long Term Debt	$258,310	27.81%	6.57%	[1]	1.83%	1.83%
Short Term Debt	137,149	14.77%	5.31%	[2]	0.78%	0.78%
Customer Deposits	7,320	0.79%	3.65%		0.03%	0.05%
Common Equity	525,931	56.63%	10.75%	[3]	6.09%	10.13%
Total Capital	$928,710	100.00%			8.73%	12.78%
Pretax interest coverage =						7.00 x

[1] Long-term rate as per testimony of Company Witness Bauer.
[2] Rate effective January 1, 2007.
[3] Cost of common equity recommended by Company Witness Hanley.
[4] Assumed combined 35% federal income tax rate and 7.5% state income tax rate = 39.875%.

	Company	NYSE Symbol	Regulated Revenues as of 12/31/06 [1]	Six Month Average High/Low Price [2]	Equity Ratio as of 12/31/06 [3]	Standard & Poor's Bond Rating	Standard & Poor's Bond Weighting*	Moody's Bond Rating	Moody's Bond Weighting*	Business Profile Score	Beta
1	Alliant Energy Corporation	LNT	93.74%	39.22	62.85%	BBB+	6	A2	8	5	0.95
2	Ameren Corporation	AEE	100.00%	53.20	50.65%	BBB-	4	Baa1	6	3	1.30
3	Empire District Electric Company	EDE	99.08%	24.03	46.00%	BBB+	6	Baa1	6	6	0.80
4	Energy East Corporation	EAS	90.25%	24.52	42.23%	BBB+	6	A3	7	3	0.95
5	MGE Energy, Inc.	MGEE	99.33%	34.44	54.79%	AA-	10	Aa3	10	4	0.75
6	Northwest Natural Gas Company	NWN	96.47%	41.83	52.00%	AA-	10	A2	8	1	0.75
7	Nicor, Inc.	GAS	86.55%	46.68	50.71%	AA	11	A1	9	3	1.30
8	NSTAR	NST	95.88%	34.46	46.52%	A+	9	A1	9	1	0.80
9	PG&E Corporation	PCG	100.00%	45.85	49.44%	BBB	5	Baa1	6	5	1.15
10	PNM Resources, Inc.	PNM	99.95%	30.10	39.68%	BBB	5	Baa2	5	6	1.00
11	Puget Energy, Inc.	PSD	99.73%	24.61	41.88%	BBB	5	Baa2	5	4	0.80
12	Wisconsin Energy Corporation	WEC	99.25%	47.04	40.12%	A-	7	A1	9	5	0.80
13	Xcel Energy Inc.	XEL	99.22%	22.97	43.62%	A-	7	A3	7	5	0.90
	Average		96.88%	$36.07	47.73%	A-	7.0	A3	7.3	3.9	0.94
	Median		99.24%	$34.45	46.26%	A	6.5	A3	7.0	4.0	0.85

[1] Revenue data from each company's SEC 10 K report for the year ended 12/31/2006
[2] Stock price data from http://finance.yahoo.com/
[3] Equity ratio data per SEC 10 K report

Selection Criteria for Proxy Group:
Percentage of regulated revenues greater than or equal to (gte) 86%
Rated gte the equivalent of BBB- (S&P) or Baa3 (Moody's)
Listed in Value Line

* Assigned Weighting by Senior Debt Credit Rating

Moody's Bond Rating	S&P Bond Rating	Assigned Weight
Aaa	AAA	13
Aa1	AA+	12
Aa2	AA	11
Aa3	AA-	10
A1	A+	9
A2	A	8
A3	A-	7
Baa1	BBB+	6
Baa2	BBB	5
Baa3	BBB-	4
Ba1	BB+	3
Ba2	BB	2
Ba3	BB-	1

Calculation of Return on Equity
National Fuel Gas Distribution Corporation
Case 07-G-0141

Calculation of GFC Cost of Equity

Merrill Lynch Cost of Market (April 2007 issue) 10.90% (March 2007)

Treasury Rates [2]	10 year	30 year
October-06	4.73%	4.85%
November-06	4.60%	4.69%
December-06	4.56%	4.68%
January-07	4.76%	4.85%
February-07	4.72%	4.82%
March-07	4.56%	4.72%

Risk Free Rate Average 10yr/30yr (Oct. 06 - Mar. 07)	4.71%
Proxy Group Beta	0.94
Proxy Group DCF ROE	8.38%
Traditional CAPM ROE	10.54%
Zero Beta CAPM ROE	10.63%
Generic CAPM ROE	10.58%
50/50 Weighting DCF with CAPM	9.39%
2/3 DCF 1/3 CAPM Weighting	8.99%

[1] Stock price data from http://finance.yahoo.com/

[2] The Federal Reserve Board, Statistics: Releases and Historical Data
http://www.federalreserve.gov/releases/

Calculation of Return on Equity
National Fuel Gas Distribution Corporation
Case 07-G-0141

Value Line: Issue 3, March 16, 2007 - Natural Gas (Distribution) Industry
Issue 1, March 02, 2007 - Electric Industry (East)
Issue 5, March 30, 2007 - Electric Industry (Central)
Issue 11, May 18, 2007 - Electric Industry (West)

	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
			Avg. Hi/Low							
			10/06 - 3/07	EPS	DPS	DPS	DPS	BPS	BPS	BPS
Company		Beta	Price [1]	2010-12	2007	2008	2010-12	2007	2008	2010-12
Alliant Energy		0.95	39.22	2.75	1.27	1.37	1.49	22.85	24.20	28.20
Ameren		1.30	53.20	3.20	2.54	2.54	2.54	32.00	32.65	36.00
Empire Distric Electric Co.		0.80	24.03	2.00	1.28	1.28	1.28	15.80	16.60	18.25
Energy East		0.95	24.52	2.00	1.17	1.21	1.45	19.30	19.75	21.50
MGE Energy Inc.		0.75	34.49	2.55	1.41	1.43	1.47	17.95	18.70	19.45
N.W. Natural Gas Co.		0.75	41.92	2.95	1.44	1.50	1.80	22.70	23.95	25.85
NICOR, Inc.		1.30	46.81	2.90	1.90	1.90	2.00	20.50	21.45	24.10
NSTAR		0.80	34.46	3.00	1.33	1.43	1.75	15.55	16.45	19.75
PG&E Corp.		1.15	45.85	3.05	1.40	1.48	1.72	22.45	24.05	28.55
PNM Resources		1.00	30.15	2.05	0.94	1.02	1.22	23.10	24.40	26.95
Puget Energy Inc.		0.80	24.63	2.00	1.00	1.00	1.20	18.80	19.45	22.00
Wisconsin Energy		0.80	47.04	3.50	1.00	1.08	1.30	26.20	27.65	32.75
Xcel Energy		0.90	23.00	1.75	0.93	0.99	1.15	14.75	15.25	17.00
	Average	0.94	36.10							
	Median	0.90								

Calculation of Return on Equity
National Fuel Gas Distribution Corporation
Case 07-G-0141

(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)	(U)	(V)	(W)	(X)
# of Shares	# of Shares	DPS Growth	Retention Rate	Return on Equity		Increase in	MBR				Sustainable	Long-Form
2007	2010-12	2010-12	2011	2011	B x R	Shares	2007	S Factor	V Factor	S x V	Growth	ROE
109.5	113.00	2.84	0.46	10.00	4.58	0.79	1.72	1.36	0.42	0.57	5.15	8.38%
208.60	216.80	0.00	0.21	9.03	1.86	0.97	1.66	1.61	0.40	0.64	2.50	3.00%
31.25	33.00	0.00	0.36	11.13	4.01	1.37	1.52	2.09	0.34	0.71	4.72	9.42%
147.75	147.75	6.22	0.28	9.43	2.59	0.00	1.27	0.00	0.21	0.00	2.59	7.87%
20.70	20.70	0.92	0.42	13.20	5.59	0.00	1.92	0.00	0.48	0.00	5.59	9.22%
27.50	29.00	6.27	0.39	11.56	4.51	1.34	1.85	2.47	0.46	1.13	5.64	9.17%
44.60	45.00	1.72	0.31	12.27	3.81	0.22	2.28	0.51	0.56	0.29	4.09	7.87%
106.81	106.81	6.96	0.42	15.65	6.52	0.00	2.22	0.00	0.55	0.00	6.52	10.59%
377.00	386.00	5.14	0.44	10.99	4.79	0.59	2.04	1.21	0.51	0.62	5.41	8.53%
77.00	80.00	6.15	0.40	7.73	3.13	0.96	1.31	1.25	0.23	0.29	3.42	6.96%
117.00	124.25	6.27	0.40	9.28	3.71	1.51	1.31	1.98	0.24	0.47	4.18	8.35%
117.00	117.00	6.38	0.63	10.99	6.91	0.00	1.80	0.00	0.44	0.00	6.91	9.06%
427.00	435.00	5.12	0.34	10.48	3.59	0.47	1.56	0.73	0.36	0.26	3.85	8.20%
												8.20%
												8.38%

National Fuel Gas Distribution Corporation
New York Division
Adjustment To Cost Elements
27 Month Inflation Estimate
Twelve Months Ending December 31, 2008
Corrected Exhibit_ (RLT_3), Schedule 16

	Year	Calendar Quarter	GDP Deflator
Forecast	2006	iv	2.60%
Forecast	2007	I	2.40%
Forecast	2007	II	2.10%
Forecast	2007	II	2.20%
Forecast	2007	IV	2.30%
Forecast	2008	I	2.10%
Forecast	2008	II	2.10%
Forecast	2008	III	2.10%
Forecast	2008	IV	2.10%
Annual Inflation Rate			2.22%
Quarterly	(1.0222)^(1/4)-1		0.00551
Monthly	(1.00550)^(1/3)-1		0.001833
Escalation Factor for 27 Months	(1.00183)^((27)-1		5.07%

Sources: Blue Chip Economic Indicators - Consensus Forecasts of GDP Chained Price Index
October 10, 2006 and November 10, 2006 editions.

Base Year = October 1, 2005 - September 30, 2006
Rate Year = January 1, 2008 - December 31, 2008

Calendar Quarter I = January 1- March 31
Calendar Quarter II = April 1- June 30
Calendar Quarter III = July 1- September 30
Calendar Quarter IV = October 1- December 31

National Fuel Gas Distribution Corporation
Case 07-G-0141
Department of Public Service Calculation of the Inflation Factor

Base Year Average GDP Price Index

QUARTER	INDEX
2005.4	114.0480
2006.1	114.9670
2006.2	115.9050
2006.3	116.4460
Base Year Average	**115.3415**

Rate Year Average GDP Price Index

QUARTER	INDEX
2008.1	120.4000
2008.2	121.0000
2008.3	121.6000
2008.4	122.2000
Rate Year Average	**121.3000**

Change from base year	5.9585	(rate year average minus base year average)
Percentage change from base year	5.1660%	
	5.17%	

Parent/Subsidiary Links

Affiliation between a stronger and a weaker entity will almost always affect the credit quality of both, unless the relative size of one is insignificant. The question rather is how close together the two ratings should be pulled on the basis of affiliation.

General Principles

In general, economic incentive is the most important factor on which to base judgments about the degree of linkage that exists between a parent and subsidiary. This matters more than covenants, support agreements, management assertions, or legal opinions. Business managers have a primary obligation to serve the interest of their shareholders, and it should generally be assumed they will act to satisfy this responsibility. If this means infusing cash into a unit previously termed a stand-alone subsidiary, or finding a way around covenants to get cash out of a protected subsidiary, then management can be expected to follow these courses of action to the extent possible. It is important to think ahead to various stress scenarios and consider how management would likely act under those circumstances. If a parent supports a subsidiary only as long as the subsidiary does not need it, such support is meaningless.

A weak entity owned by a strong parent usually—although not always—will enjoy a stronger rating than it would on a stand-alone basis. Assuming the parent has the ability to support its subsidiary during a period of financial stress, the spectrum of possibilities still ranges from ratings equalization at one extreme to very little or no help from the parent's credit strength at the other. The greater the gap to be bridged, the more evidence of support is necessary.

The parent's rating is, of course, assigned when it guarantees or assumes subsidiary debt. Guarantees and assumption of debt are different legal mechanisms that are equivalent from a rating perspective. Cross-default and cross-acceleration provisions in bond indentures also can be important rating considerations. They can provide a powerful incentive for a stronger entity to support debt of a weaker affiliate, because they trigger default of the stronger unit in the event of a default by the weaker affiliate. Bear in mind, however, that cross-default provisions can disappear if the debt that contains the provisions is retired or renegotiated.

A strong subsidiary owned by a weak parent generally is rated no higher than the parent. The key reasons:

- The ability of and incentive for a weak parent to take assets from the subsidiary or burden it with liabilities during financial stress; and
- The likelihood that a parent's bankruptcy would cause the subsidiary's bankruptcy, regardless of its stand-alone strength.

Both factors argue that, in most cases, a "strong" subsidiary is no further from bankruptcy than its parent, and thus cannot have a higher rating. Experience has shown

that bankrupt industrial companies file with their subsidiaries more often than not.

For rating purposes, the risk of "substantive consolidation" is a side issue. Consolidation in bankruptcy, sometimes referred to as substantive consolidation, occurs when assets of a parent and its subsidiaries are thrown together by the bankruptcy court into a single pool and their value allocated to all creditors without regard for any distinction between the two legal entities. In such cases, creditors of a subsidiary may lose all claim to the value associated with that particular subsidiary. Much more often, a parent and its subsidiaries will all file, but each legal entity will be kept separate in the bankruptcy proceeding. Creditors keep their claim to the assets of the specific legal entity to which they extended credit. Because corporate ratings address default risk, the key issue is not consolidation, but rather whether a bankruptcy filing will occur. Nonconsolidation opinions are, therefore, of more value with respect to recovery ratings and issue ratings of subsidiary debt, because those opinions address the likelihood of substantive consolidation, rather than the likelihood of simultaneous bankruptcies for parent and subsidiary. Perhaps the willingness to obtain such an opinion might also serve as some evidence of management intent regarding a subsidiary's independence.

Protective covenants apparently protect a subsidiary from its parent by restricting dividends or asset transfers. In general, this type of covenant is given very limited weight in a rating determination. Reasons for limited value of protective covenants:

- They do not affect the parent's ability to file the subsidiary into bankruptcy;
- It is very difficult to structure provisions that cannot be evaded; and
- Ultimately, courts usually cannot force a company to obey the covenant. During severe financial stress, especially prior to a bankruptcy, a weak parent may have a powerful incentive to strip a stronger subsidiary. The court can, at best, only award monetary damages after the fact to a creditor who has incurred a loss (when the issue defaults) and chooses to sue.

Subsidiaries/Joint Ventures/ Nonrecourse Projects

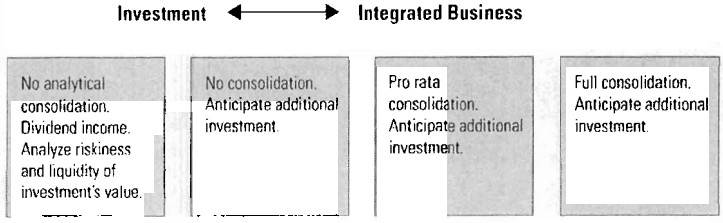
With respect to the parent's credit rating, affiliated businesses' operations and their debt may be treated analytically in several different ways, depending on the perceived relationship between the parent and the operating unit. These alternatives are illustrated by the spectrum below.

The same alternatives may apply when companies invest in joint ventures that issue debt in their own name, and when companies choose to finance various projects with nonrecourse debt. These analytical issues also may apply when companies take pains to finance some of their wholly owned subsidiaries on a stand-alone, nonrecourse basis, especially in the case of noncore or foreign operations.

Sometimes, the relationship may be characterized as an investment. In that case, the operational results are carved out; the parent gets credit for dividends received; the parent is not burdened with the operation's debt obligations; and the value, volatility, and liquidity of the investment are analyzed on a case-specific basis. The quality of the investment dictates how much leverage at the parent company it can support.

At the other end of the spectrum, operations may be characterized as an integrated business. Then, the analysis would fully consolidate the operation's income sheet and balance sheet; and the risk profile of the operations is integrated with the overall business risk analysis. Or, the business may

The Parent/Operating Unit Relationship



not fall neatly into either category; it may lie somewhere in the middle of the spectrum. In such cases, the analytical technique calls for partial or pro rata consolidation and usually the presumption of additional investment, that is, the money the company likely would spend to bail out the unit in which it has invested.

This characterization of the relationship also governs the approach to rating the debt of the subsidiary or the project. The size of the gap between the stand-alone credit quality of the project or unit and that of the group, sponsor, or parent is a function of the perceived relationship: the greater the integration, the greater the potential for parent or sponsor support. The reciprocal of burdening the parent with the nonrecourse debt is the attribution of support to that debt. The notion of support extends beyond formal or legal aspects—and can narrow, and sometimes even close, the gap between the rating level of the parent and that of the issuing unit.

If the credit quality of a subsidiary is higher than that of the parent, the ability of the parent to control the unit typically caps the rating at the parent level. Exceptions are made in the case of bankruptcy-remote special purpose vehicles for securitization, regulated entities, independent finance subsidiaries, and the rare instances that have extremely tight covenant protection. The measure of control the parent can exercise is very much a function of ownership, so the percent of ownership of a joint venture or project and the nature of the other owner are critical rating criteria in such situations. Where two owners can prevent each other from harming the credit quality of a joint venture, the debt of the venture can be rated higher than either's rating, if justified on a stand-alone basis.

Formal support—such as a guarantee (not merely a comfort letter)—by one parent or sponsor ensures that the debt will be rated at the level of the support provider. Support from more than one party, such as a joint and several guarantee, can lead to a rating higher than that of either support provider. *(See Public Finance Criteria—Jointly Supported Debt.)*

Determining Factors

No single factor determines the analytical view of the relationship with the business venture in question. Rather, these are several factors that, taken together, will lead to one characterization or another. These factors include:

- Strategic importance—integrated lines of business or critical supplier;
- Percentage ownership (current and prospective);
  Management control;
- Shared name;
- Domicile in same country;
- Common sources of capital;
- Financial capacity for providing support;
- Significance of amount of investment;
- Investment relative to amount of debt at the venture or project;
- Nature of other owners (strategic or financial; financial capacity);
- Management's stated posture;
- Track record of parent company in similar circumstances; and
- The nature of potential risks.

Some factors indicate an economic rationale for a close relationship or debt support. Others, such as management control or shared name, pertain also to a moral obligation, with respect to the venture and its liabilities. Accordingly, it can be crucial to distinguish between cases where the risk of default is related to commercial or economic factors, and where it arises from litigation or political factors. (No parent company or sponsor can be expected to feel a moral obligation if its unit is expropriated.)

Percentage ownership is an important indication of control, but it is not viewed in the same absolute fashion that dictates the accounting treatment of the relationship. Standard & Poor's also tries to be pragmatic in its analysis. For example, awareness of a handshake agreement to support an ostensibly nonrecourse loan would overshadow other indicative factors.

Clearly, there is an element of subjectivity in assessing most of these factors, as well as the overall conclusion regarding the relationship. There is no magic formula for the combination of these factors that would lead to one analytical approach or another.

Regulated Companies

Normal criteria against rating a subsidiary higher than a parent do not necessarily apply to a regulated subsidiary. A regulated subsidiary is indeed rated higher than the parent if its stand-alone strength so warrants and regulatory protection is sufficiently strong. However, the nature of regulation has been changing—and creditors can rely on regulators to a much smaller extent that in the past. For one thing, deregulation is spreading. As competition enters markets, the providers are no longer monopolies—and the basis of regulation is completely different. Most of all, regulators are more concerned with service quality than credit quality.

For example, some regulated utilities are strong credits on a stand-alone basis, but often are owned by companies that finance their holding in the utility with debt at the parent company (known as double leveraging), or that own other, weaker business units. To achieve a rating differential from that of the consolidated group requires evidence—based on the specific regulatory circumstances—that regulators will act to protect the utility's credit profile.

The analyst makes this determination on a case-by-case basis, because regulatory jurisdictions vary. Implications of regulation are different for companies in Wisconsin and those in Florida or those subject to the scrutiny of the Securities and Exchange Commission under the 1935 Public Utilities Act. Also, regulators might react differently depending on whether funds that would be withdrawn from the utility were destined to support an out-of-state affiliate or another in-state entity. Finally, while regulators may be inclined to support investment-grade credit quality, there is little basis to believe regulators would insist that a utility maintain an 'A' profile. Their mandate is to protect provision of services—which is not a direct function of the provider's financial health. In fact, if a utility has little debt, the overall cost of capital, and therefore the cost of service, can be higher.

There is a corollary that negatively affects the parent and weaker units whenever a utility subsidiary is rated on its stand-alone strength. If the regulated utility is indeed insulated from the other units in its group, its cash flow is less available to support them. To the extent, then, that a utility is rated higher than the consolidated group's credit quality, the parent and weaker units are correspondingly rated lower than the group rating level.

Foreign Ownership

Parent/subsidiary considerations are somewhat different when a company is owned by a foreign parent or group. The foreign parent is not subject to the same bankruptcy code, so a bankruptcy of the parent would not, in and of itself, prompt a bankruptcy of the subsidiary. In most jurisdictions, insolvency is treated differently from the way it is treated in the U.S., and various legal and regulatory constraints and incentives need to be considered. Still, in all circumstances, it is important to evaluate the parent's credit quality. The foreign parent's creditworthiness is a crucial factor in the subsidiary's rating to the extent the parent might be willing and able either to infuse the subsidiary with cash or draw cash from it. A separate parent or group rating will be assigned (on a confidential basis) to facilitate this analysis.

Even when subsidiaries are rated higher than foreign parents, the gap usually does not exceed one full rating category. It is difficult to justify a larger gap, because it would entail a clear-cut demonstration that, even under a stress scenario, the parent's interest would be best served by keeping the subsidiary financially strong, rather than using it as a source of cash.

In the opposite case of weak subsidiaries and strong foreign parents, the ratings gap tends to be larger than if both were domestic entities. Sovereign boundaries impede integration and make it easier for a foreign parent to distance itself in the event of problems at the subsidiary.

"Smoke-and-Mirrors" Subsidiaries

Some multibusiness enterprises controlled by a single investor or family are characterized by:

- Unusually complex organizational structures;

Opportunistic buying and selling of operations, with little or no strategic justification;
Cash or assets moved between units to achieve some advantage for the controlling party; and

- Aggressive use of financial leverage.

By their nature, these types of companies tend to be highly speculative credits, and it is inadvisable to base credit judgments on the profile of any specific unit at any particular point in time.

The approach to rating a unit of such an organization still begins with some assessment of the entire group. Some of the affiliated units may be private companies; nonetheless, at least some rough assessment must be developed. In general, no unit in the group is rated higher than the consolidated group would be rated. Neither indenture covenants nor nonconsolidation opinions can be relied on to support a higher rating for a particular subsidiary.

At the same time, there is no reason for all entities in a "smoke-and-mirrors" family to receive the identical rating. Any individual unit can be notched down as far as needed from the consolidated rating to reflect stand-alone weakness. This reflects the probability that a weak unit will be allowed to fail if the controlling party determines no value can be salvaged from it. Complex structures are developed in order to maximize such flexibility for the controlling party.

Finance Subsidiaries' Rating Link to Parent

Finance units are unlike other subsidiaries from a criteria perspective. In turn, there are two types of finance subsidiaries—independent and captive—that are very distinct in terms of the analytical approach employed by Standard & Poor's Ratings Services.

Independent Finance Subsidiaries

Independent finance subsidiaries can receive ratings higher than those of the parent, because of the high degree of separation between these subsidiaries and the parent. A finance company's continuous need for capital at a competitive cost creates a powerful incentive to maintain its creditworthiness. Therefore, it can be argued that the parent would be better served, in a stress scenario, by divesting the still-healthy subsidiary than by weakening it or risking drawing it into bankruptcy. In addition, there must be evidence of the parent company's willingness to leave the subsidiary alone, including a history of reasonable dividend and management fee payouts to the parent.

Nonetheless, a finance company subsidiary rating still is linked to the credit quality of the company to which it belongs. If the finance company's credit fundamentals are stronger than those of the consolidated entity, one cannot rule out the risk that this strength could be siphoned off to support weaker affiliates or service the debt burden of the parent. Whatever the rating would be on a stand-alone assessment, it is unlikely an independent finance subsidiary would ever be rated more than one full rating category above the parent rating level. To the extent that part of the receivables portfolio were related to parent company sales, there would be an additional tie to the parent risk profile.

Conversely, if the consolidated entity's rating is higher than the subsidiary's, because of the stronger creditworthiness of the other affiliates, the analysis would attribute some of that strength to the finance company, making possible a higher rating than it could receive on its own. Assessing the degree of credit support includes the usual subjective factors, such as management intentions and shared names of the parent and subsidiary. In the case of a subsidiary that has been formed or acquired only recently, a demonstrable record of support is lacking and questions might remain concerning the long-term strategy for the subsidiary. Some formal support likely will be required. The most frequently used support agreement commits the parent to maintain some minimum level of net worth at its subsidiary. Frequently, the parent also will agree to assume problem assets and to maintain minimum fixed-charge coverage.

Captive Finance Companies

A captive finance company—i.e., a finance subsidiary with over 70% of its portfolio consisting of receivables generated by sales of

Rating Methodology: Industrials & Utilities

Standard & Poor's uses a format that divides the analytical task, so that all salient issues are considered. The framework we use looks first at fundamental business analysis; then comes financial analysis.

Credit ratings often are identified with financial analysis, and especially ratios. But it is critical to realize that ratings analysis starts with the assessment of the business and competitive profile of the company. Two companies with identical financial metrics are rated very differently, to the extent that their business challenges and prospects differ.

Standard & Poor's developed the matrices shown below to make explicit the rating outcomes that are typical for various business risk/financial risk combinations.

Business Risk/ Financial Risk Matrix

Table 1 illustrates the relationship of business and financial risk profiles to the issuer credit rating. Table 2 shows the financial risk ratios for industrial companies.

How can one use the matrices to better understand rating conclusions? Here is one illustration:

Company ABC is deemed to have a 'satisfactory' business risk profile. (It is typical, in that respect, of investment-grade industrial corporates—what we previously labeled 'average'.)

If ABC's financial risk were 'intermediate', the expected rating assignment should be 'BBB'. The table of indicative ratios can be used as a simple starting point. ABC's ratios of cash flow to debt of 35% and debt leverage of 40% are characteristic of 'intermediate' financial risk. In reality, of course, the assessment of financial risk is not so simplistic! It encompasses financial policies and risk tolerance; several perspectives on cash flow adequacy, including free cash flow and the degree of flexibility regarding capital expenditures; and various measures of liquidity, including coverage of short-term maturities.

Company ABC can aspire to being upgraded to the 'A' category, by reducing its debt burden to the point that cash flow to debt is over 60% and debt leverage is only 25%. Conversely, ABC may choose to become more financially aggressive—say, to reward shareholders by borrowing to repurchase shares. It can expect to be rated in the 'BB' category if its cash flow to debt ratio is 20% and debt leverage remains below 55%, and there is a commitment to keeping finances at these levels.

The rating outcomes indicated are not meant to be precise. There can always be small positives and negatives that would lead to a notch higher or lower than the typical outcomes. Moreover, there will always be exceptions—cases that do not fit neatly into this analytical framework: For example, liquidity concerns or litigation could pose overarching risks.

The matrix does not address the lowest rungs of the credit spectrum, i.e., the 'CCC' category and below. Those ratings always reflect some impending crisis or extraordinary vulnerability. The balanced approach that underlies the matrix framework just does not work well for such situations.

Standard & Poor's strives for transparency around the rating process. It should be apparent, however, that the ratings process cannot be entirely reduced to a cookbook approach: Ratings incorporate many subjective judgments, and remain as much an art as a science.

Corporate credit analysis factors.

There are several categories underlying both the business and financial risk assessments. These can vary by industry, in order to focus on the most relevant factors.

Business risk

- Country risk
- Industry characteristics
- Company position
- Product portfolio/Marketing
- Technology
- Cost efficiency
- Strategic and operational management competence
- Profitability/Peer group comparisons

Financial risk

- Accounting
- Corporate governance/Risk tolerance/Financial policies
  Cash-flow adequacy
- Capital Structure/Asset Protection
  Liquidity/Short-term factors

Industry risk

Each rating analysis begins with an assessment of the company's environment. The degree of operating risk facing a participant in a given business depends on the dynamics of that business. This analysis focuses on the strength of industry prospects, as well as the competitive factors affecting that industry.

The many factors assessed include industry prospects for growth, stability, or decline, and the pattern of business cycles (*see "Cyclicality"*). It is critical, for example, to determine vulnerability to technological change, labor unrest, or regulatory interference. Industries that have long lead times or that require fixed plant of a specialized nature face heightened risk. The implications of increasing competition obviously are crucial. Standard & Poor's knowledge of investment plans of the major players in any industry offers a unique vantage point from which to assess competitive prospects.

While any particular profile category can be the overriding rating consideration, the industry risk assessment can be a key factor in determining the rating to which any participant in the industry can aspire. It would be hard to imagine assigning 'AA' and 'AAA' debt ratings to companies with extensive participation in industries of above-average risk, regardless of how conservative their financial posture. Examples of these industries are integrated steel makers, tire and rubber companies, home-builders, and most of the mining sector.

Conversely, some industries are regarded favorably. They are distinguished by such traits as steady demand growth, ability to maintain margins without impairing future

Table 1—Business Risk/Financial Risk

	Financial Risk Profile				
Business Risk Profile	**Minimal**	**Modest**	**Intermediate**	**Aggressive**	**Highly Leveraged**
Excellent	AAA	AA	A	BBB	BB
Strong	AA	A	A-	BBB-	BB-
Satisfactory	A	BBB+	BBB	BB+	B+
Weak	BBB	BBB-	BB+	BB-	B
Vulnerable	BB	B+	B+	B	B-

prospects, flexibility in the timing of capital outlays, and moderate capital intensity. Industries possessing one or more of these attributes include manufacturers of branded consumer products, drug companies, and publishing and broadcasting. High marks in this category do not translate into high ratings for all industry participants, but the cushion of strong industry fundamentals provides helpful support.

Again, the industry risk assessment sets the stage for analyzing specific company risk factors and establishing the priority of these factors in the overall evaluation. For example, if technology is a critical competitive factor, R&D prowess is stressed. If the industry produces a commodity, cost of production assumes major importance.

Keys to success

As part of the industry analysis, key rating factors are identified: the keys to success and areas of vulnerability. A company's rating is, of course, crucially affected by its ability to achieve success and avoid pitfalls in its business.

The nature of competition is, obviously, different for different industries. Competition can be based on price, quality of product, distribution capabilities, image, product differentiation, service, or some other factor. Competition may be on a national basis, as is the case with major appliances. In other industries, such as chemicals, competition is global, and in still others, such as cement, competition is strictly regional. The basis for competition determines which factors are analyzed for a given company.

For any particular company, one or more factors can hold special significance, even if that factor is not common to the industry. For example, the fact that a company has only one major production facility normally is regarded as an area of vulnerability. Similarly, reliance on one product creates risk, even if the product is highly successful. For example, a pharmaceutical company has reaped a financial bonanza from just two medications. The company's debt is reasonably highly rated, given its exceptional profits and cash flow, but it would be viewed still more favorably were it not for the dependence on only two drugs (which are, after all, subject to competition and patent expiration).

Diversification factors

When a company participates in more than one business, each segment is separately analyzed. A composite is formed from these building blocks, weighting each element according to its importance to the overall organization. The potential benefits of diversification, which may not be apparent from the additive approach, are then considered.

A truly diversified company will not have a single business segment that is dominant. One major automobile company received much attention for "diversifying" into aerospace and computer processing. But it never became a diversified company, because its success was still determined substantially by one line of business.

Limited credit is given if the various lines of business react similarly to economic cycles. For example, diversification from nickel into copper cannot be expected to stabilize per-

Table 2—Financial Risk Indicative Ratios*

	Cash flow (Funds from operations/Debt) (%)	Debt leverage (Total debt/Capital) (%)
Minimal	Over 60	Below 25
Modest	45-60	25-35
Intermediate	30-45	35-45
Aggressive	15-30	45-55
Highly leveraged	Below 15	Over 55

* Fully adjusted, historically demonstrated, and expected to consistently continue

formance; similar risk factors are associated with both metals.

Most critical is a company's ability to manage diverse operations. The skills and practices needed to run a business differ greatly among industries, not to mention the challenge posed by participation in several different industries. For example, a number of old-line industrial companies rushed to diversify into financial services, only to find themselves saddled with unfamiliar businesses they had difficulty managing.

Some companies have adopted a portfolio approach to their diverse holdings. The business of buying and selling businesses is different from running operations and is analyzed differently. The ever-changing character of the company's assets typically is viewed as a negative. On the other hand, there is often an offsetting advantage: greater flexibility in raising funds if each line of business is a discrete unit that can be sold off.

Size considerations

Standard & Poor's has no minimum size criterion for any given rating level. However, size turns out to be significantly correlated to ratings. The reason: size often provides a measure of diversification, and/or affects competitive position.

Small companies also can possess the competitive benefits of a dominant market position, although that is not common. Obviously, the need to have a broad product line or a national marketing structure is a factor in many businesses and would be a rating consideration. In this sense, sheer mass is not important; demonstrable market advantage is.

Market-share analysis often provides important insights. However, large shares are not always synonymous with competitive advantage or industry dominance. For instance, if an industry has a number of large but comparably sized participants, none may have a particular advantage or disadvantage. Conversely, if an industry is highly fragmented, even the large companies may lack pricing leadership potential. The textile industry is an example.

Small companies are, almost by definition, more concentrated in terms of product, number of customers, or geography. In effect, they lack some elements of diversification that can benefit larger companies. To the extent that markets and regional economies change, a broader scope of business affords protection. This consideration is balanced against the performance and prospects of a given business.

In addition, lack of financial flexibility is usually an important negative factor in the case of very small companies. Adverse developments that would simply be a setback for companies with greater resources could spell the end for companies with limited access to funds.

There is a controversial notion that small, growth-oriented companies represent a better credit risk than older, declining companies. While this is intuitively appealing to some, it ignores some important considerations. Large companies have substantial staying power, even if their businesses are troubled. Their constituencies—including large numbers of employees—can influence their fates. Banks' exposure to these companies may be quite extensive, creating a reluctance to abandon them. Moreover, such companies often have accumulated a lot of peripheral assets that can be sold. In contrast, the promise of small companies can fade very quickly and their minuscule equity bases will offer scant protection, especially given the high debt burden some companies deliberately assume.

Fast growth often is subject to poor execution, even if the idea is well conceived. There also is the risk of overambition. Moreover, some companies tend to continue high-risk financial policies as they aggressively pursue ever-greater objectives, limiting any credit-quality improvement. There is little evidence to suggest growth companies initially receiving speculative-grade ratings have particular upgrade potential. Many more defaulted over time than achieved investment grade. Oil exploration, retail, and high technology companies especially have been vulnerable, even though their great potential was touted at the time they first came to market.

Management evaluation

Management is assessed for its role in determining operational success and also for its risk tolerance. The first aspect is incorporated in the business-risk analysis; the second is weighed as a financial policy factor.

STANDARD &POOR'S RatingsDirect

RESEARCH

Issuer Ranking:

U.S. Utility And Power Companies, Strongest To Weakest

Publication date: 27-Apr-2007
Primary Credit Analyst: **Richard W** Cortright, Jr., New York (1) 212-438-7665;
richard_cortright@standardandpoors.com

The following list contains Standard & Poor's Ratings Services' ratings, outlooks, and business profiles for utilities. This list, dated April 27, 2007, reflects the current ratings, outlooks, and rankings. Companies are grouped into five industry sub-sectors. Within each sub-sector, issuers are ranked by corporate credit rating and outlook, and then ranked by relative credit strength within the same rating and outlook profile.

A Standard & Poor's rating outlook assesses the potential direction of an issuer's long-term debt rating over the intermediate to longer term. In determining a rating outlook, consideration is given to any changes in the economic and/or fundamental business conditions. An outlook is not necessarily a precursor of a rating change or future CreditWatch action. "Positive" indicates that a rating may be raised; "negative" means a rating may be lowered; "stable" indicates that ratings are not likely to change; and "developing" means ratings may be raised or lowered.

Utility business profiles are categorized from '1' (excellent) to '10' (vulnerable). To determine a utility's business profile, Standard & Poor's analyzes the following qualitative business or operating characteristics typical of a utility: markets and service area economy; competitive position; fuel and power supply; operations; asset concentration; regulation; and management. Issuer credit ratings, shown as long-term rating/outlook or CreditWatch/short-term rating, are local and foreign currency unless otherwise noted. A dash (--) indicates not rated. An asterisk (*) indicates that the utility was reviewed this week and its ranking position was updated.

U.S. Utility And Power Ranking List

Company	Corporate Credit Rating	Business Profile
1. Regulated Transmission and Distribution – Electric, Gas, and Water		
Baton Rouge Water Works Co. (The)	AA/Stable/--	1
Nicor Gas Co.	AA/Negative/A-1+	2
Nicor Inc.	AA/Negative/A-1+	3
Northwest Natural Gas Co.	AA-/Stable/A-1+	1
Washington Gas Light Co.	AA-/Negative/A-1	2
WGL Holdings Inc.	AA-/Negative/A-1	3
NSTAR Electric Co.	A+/Stable/A-1	1
NSTAR	A+/Stable/A-1	1
NSTAR Gas Co.	A+/Stable/--	2
Aqua Pennsylvania Inc.	A+/Stable/--	2
California Water Service Co.	A+/Stable/--	3
New Jersey Natural Gas Co.	A+/Negative/A-1	2

U.S. Utility And Power Ranking List (cont.)

KeySpan Energy Delivery Long Island	A+/CW-Neg/--	1
KeySpan Energy Delivery New York	A+/CW-Neg/--	
Southern California Gas Co.	A/Stable/A-1	1
Connecticut Water Service Inc.	A/Stable/--	3
Connecticut Water Co. (The)	A/Stable/--	2
Piedmont Natural Gas Co. Inc.	A/Stable/--	2
Laclede Gas Co.	A/Stable/A-1	3
Laclede Group Inc. (The)	A/Stable/--	3
Central Hudson Gas & Electric Corp.	A/Stable/--	3
Consolidated Edison Co. of New York Inc.	A/Negative/A-2	2
Orange and Rockland Utilities Inc.	A/Negative/A-2	2
Rockland Electric Co.	A/Negative/--	2
Consolidated Edison Inc.	A/Negative/A-2	2
Colonial Gas Co.	A/CW-Neg/--	2
Boston Gas Co.	A/CW-Neg/--	2
Massachusetts Electric Co.	A/CW-Neg/A-1	1
Narragansett Electric Co.	A/CW-Neg/A-1	1
National Grid USA	A/CW-Neg/A-1	2
Niagara Mohawk Power Corp.	A/CW-Neg/--	3
United Water New Jersey	A-/CW-Pos/--	4
United Waterworks	A-/CW-Pos/--	4
American States Water Co.	A-/Positive/--	3
Golden State Water Co.	A-/Positive/--	3
Indiana Gas Co. Inc.	A-/Stable/--	1
York Water Co. (The)	A-/Stable/--	2
Middlesex Water Co.	A-/Stable/--	3
Public Service Co. of North Carolina Inc.	A-/Stable/A-2	2
PPL Electric Utilities Corp.	A-/Stable/A-2	3
Questar Gas Co.	A-/Stable/--	3
Atlanta Gas Light Co.	A-/Negative/--	2
Pivotal Utility Holdings	A-/Negative/--	4
North Shore Gas Co.	A-/Negative/--	3
Peoples Gas Light & Coke Co. (The)	A-/Negative/A-2	3
Wisconsin Gas LLC	A-/Negative/A-2	2
American Water Capital Corp.	A-/CW-Neg/A-2	2
Alabama Gas Corp.	BBB+/Stable/--	2
Cascade Natural Gas Corp.	BBB+/Stable/--	2
South Jersey Gas Co.	BBB+/Stable/--	3
Central Maine Power Co.	BBB+/Negative/--	3
Connecticut Natural Gas Corp.	BBB+/Negative/--	3
Southern Connecticut Gas Co.	BBB+/Negative/--	3

24 Companies rated A- and BBB+

Average Business Profile Score = 2.9

U.S. Utility And Power Ranking List (cont.)

Baltimore Gas & Electric Co.	BBB+/Negative/A-2	5
PECO Energy Co.	BBB+/CW-Neg/A-2	4
CenterPoint Energy Houston Electric LLC	BBB/Positive/--	2
CenterPoint Energy Inc.	BBB/Positive/A-2	3
CenterPoint Energy Resources Corp.	BBB/Positive/--	4
Western Massachusetts Electric Co.	BBB/Stable/--	1
Connecticut Light & Power Co.	BBB/Stable/--	3
Yankee Gas Services Co.	BBB/Stable/--	3
Bay State Gas Co.	BBB/Stable/--	2
Atlantic City Electric Co.	BBB/Stable/A-2	3
Potomac Electric Power Co.	BBB/Stable/A-2	3
Delmarva Power & Light Co.	BBB/Stable/A-2	4
AEP Texas Central Co.	BBB/Stable/--	3
AEP Texas North Co.	BBB/Stable/--	3
Jersey Central Power & Light Co.	BBB/Stable/--	4
Cleveland Electric Illuminating Co.	BBB/Stable/--	5
Ohio Edison Co.	BBB/Stable/A-2	5
Pennsylvania Power Co.	BBB/Stable/--	5
Toledo Edison Co.	BBB/Stable/--	5
Metropolitan Edison Co.	BBB/Stable/--	4
Pennsylvania Electric Co.	BBB/Stable/--	4
Northeast Utilities	BBB/Stable/--	7
Public Service Electric & Gas Co.	BBB/Negative/A-3	3
Texas-New Mexico Power Co.	BBB/Negative/--	4
Duquesne Light Co.	BBB/CW-Neg/--	4
Southwest Gas Corp.	BBB-/Positive/--	3
TXU Electric Delivery Co.	BBB-/CW-Neg/--	2
Commonwealth Edison Co.	BBB-/CW-Neg/A-3	8
Potomac Edison Co.	BB+/Positive/--	3
West Penn Power Co.	BB+/Positive/--	3
NorthWestern Corp.	BB+/CW-Neg/--	5
*Central Illinois Public Service Co.	BB/CW-Neg/--	8
Illinois Power Co.	BB/CW-Neg/--	8
SEMCO Energy Inc.	BB-/Positive/--	4

2. Transmission Only - Electric, Gas, and Other

American Transmission Co.	A+/Stable/A-1	1
Midwest Independent Transmission System Operator Inc.	A+/Stable/--	1

U.S. Utility And Power Ranking List (cont.)

Northern Natural Gas Co.	A/Stable/--	2
New England Power Co.	A/CW-Neg/A-1	1
Questar Pipeline Co	A-/Stable/--	3
ITC Holdings Corp.	BBB/Positive/--	2
International Transmission Co.	BBB/Positive/--	2

3. Integrated Electric, Gas, and Combination Utilities

Madison Gas & Electric Co.	AA-/Stable/A-1+	4
Southern Co.	A/Stable/A-1	4
Georgia Power Co.	A/Stable/A-1	4
Alabama Power Co.	A/Stable/A-1	4
Mississippi Power Co.	A/Stable/A-1	4
Gulf Power Co.	A/Stable/--	4
Savannah Electric & Power Co.	A/Stable/--	4
Florida Power & Light Co.	A/Stable/A-1	4
San Diego Gas & Electric Co.	A/Stable/A-1	5
Wisconsin Public Service Corp.	A/Negative/A-2	4
MidAmerican Energy Co.	A-/Stable/A-1	5
Vectren Utility Holdings Inc.	A-/Stable/A-2	3
South Carolina Electric & Gas Co.	A-/Stable/A-2	4
SCANA Corp.	A-/Stable/--	4
Southern Indiana Gas & Electric Co.	A-/Stable/--	4
Wisconsin Power & Light Co.	A-/Stable/A-2	4
PacifiCorp	A-/Stable/A-1	5
Wisconsin Electric Power Co.	A-/Negative/A-2	4
AGL Resources Inc.	A-/Negative/A-2	4
Equitable Resources Inc.	A-/CW-Neg/A-2	6
Oklahoma Gas & Electric Co.	BBB+/Stable/A-2	5
Northern States Power Wisconsin	BBB+/Stable/--	4
Kentucky Utilities Co.	BBB+/Stable/A-2	5
Louisville Gas & Electric Co.	BBB+/Stable/--	5
Interstate Power & Light Co.	BBB+/Stable/A-2	5
Southern California Edison Co.	BBB+/Stable/A-2	5
ALLETE Inc.	BBB+/Stable/A-2	6
Enogex Inc.	BBB+/Stable/--	7
National Fuel Gas Co.	BBB+/Stable/A-2	7
Progress Energy Florida Inc.	BBB+/Stable/A-2	4

U.S. Utility And Power Ranking List (cont.)		
Progress Energy Carolinas Inc.	BBB+/Stable/A-2	5
Progress Energy Inc.	BBB+/Stable/A-2	5
Questar Market Resources Inc.	BBB+/Stable/--	8
Montana-Dakota Utilities Co.	BBB+/Stable/--	6
Hawaiian Electric Co. Inc.	BBB+/Negative/A-2	5
Wisconsin Energy Corp.	BBB+/Negative/A-2	5
Portland General Electric Co.	BBB+/Negative/A-2	5
Idaho Power Co.	BBB+/Negative/A-2	5
IDACORP Inc.	BBB+/Negative/A-2	5
Energy East Corp.	BBB+/Negative/A-2	3
New York State Electric & Gas Corp.	BBB+/Negative/A-2	3
Rochester Gas & Electric Corp.	BBB+/Negative/--	3
Green Mountain Power Corp.	BBB/CW-Pos/--	5
Duke Energy Carolinas LLC	BBB/Positive/A-2	4
Duke Energy Ohio Inc.	BBB/Positive/A-2	6
Duke Energy Indiana Inc.	BBB/Positive/A-2	4
Duke Energy Kentucky Inc.	BBB/Positive/--	5
Consolidated Natural Gas Co.	BBB/Positive/A-2	6
Virginia Electric & Power Co.	BBB/Positive/A-2	5
Public Service Co. of Colorado	BBB/Stable/A-2	4
Michigan Consolidated Gas Co.	BBB/Stable/A-2	4
Atmos Energy Corp.	BBB/Stable/A-2	4
Xcel Energy Inc.	BBB/Stable/A-2	5
Public Service Co. of New Hampshire	BBB/Stable/--	5
Northern States Power Co.	BBB/Stable/A-2	5
Southwestern Public Service Co.	BBB/Stable/A-2	5
American Electric Power Co. Inc.	BBB/Stable/A-2	5
Appalachian Power Co.	BBB/Stable/--	5
Columbus Southern Power Co.	BBB/Stable/--	4
Ohio Power Co.	BBB/Stable/--	4
Indiana Michigan Power Co.	BBB/Stable/--	6
Kentucky Power Co.	BBB/Stable/--	5
Public Service Co. of Oklahoma	BBB/Stable/--	5
Southwestern Electric Power Co.	BBB/Stable/--	5
Northern Indiana Public Service Co.	BBB/Stable/--	5
NiSource Inc	BBB/Stable/--	4
Pacific Gas & Electric Co	BBB/Stable/A-2	5
Dayton Power & Light Co.	BBB/Stable/--	5
Detroit Edison Co.	BBB/Stable/A-2	6
El Paso Electric Co.	BBB/Stable/--	6
Cleco Power LLC	BBB/Negative/--	6
Public Service Co. of New Mexico	BBB/Negative/A-3	6
PNM Resources Inc.	BBB/Negative/A-3	6

U.S. Utility And Power Ranking List (cont.)		
Entergy Arkansas Inc.	BBB/Negative/--	5
Entergy Louisiana LLC	BBB/Negative/--	5
Entergy Mississippi Inc.	BBB/Negative/--	6
Entergy Gulf States Inc.	BBB/Negative/--	6
Kansas City Power & Light Co.	BBB/CW-Neg/A-3	6
Puget Sound Energy Inc.	BBB-/Stable/A-3	4
Puget Energy Inc.	BBB-/Stable/--	4
Tampa Electric Co.	BBB-/Stable/A-3	4
Westar Energy Inc.	BBB-/Stable/--	5
Kansas Gas & Electric Co.	BBB-/Stable/--	5
Arizona Public Service Co.	BBB-/Stable/A-3	6
Pinnacle West Capital Corp.	BBB-/Stable/A-3	6
Empire District Electric Co.	BBB-/Stable/A-3	6
Black Hills Power Inc.	BBB-/Negative/--	6
System Energy Resources Inc.	BBB-/Negative/--	7
*Union Electric Co.	BBB-/CW-Neg/A-3	5
*Ameren Corp.	BBB-/CW-Neg/A-3	7
TXU U.S. Holdings Co.	BBB-/CW-Neg/--	8
Monongahela Power Co.	BB+/Positive/--	5
Indianapolis Power & Light Co.	BB+/Positive/--	4
IPALCO Enterprises Inc.	BB+/Positive/--	4
IPALCO Enterprises Inc.	BB+/Positive/--	5
Consumers Energy Co.	BB/CW-Pos/--	6
Tucson Electric Power Co.	BB/Stable/B-2	6
*Central Illinois Light Co.	BB/CW-Neg/--	8
*CILCORP Inc.	BB/CW-Neg/--	8
Nevada Power Co.	BB-/Stable/--	5
Sierra Pacific Power Co.	BB-/Stable/--	5
Sierra Pacific Resources	BB-/Stable/B-2	5
Aquila Inc.	B/CW-Pos/B-2	6
Entergy New Orleans Inc.	D/--/--	8
4. Diversified Energy and Diversified Non-Energy		
FPL Group Inc.	A/Stable	5
KeySpan Corp.	A/CW-Neg/A-1	4
Vectren Corp.	A-/Stable/--	4

U.S. Utility And Power Ranking List (cont.)		
MidAmerican Energy Holdings Co	A-/Stable/--	4
Peoples Energy Corp.	A-/Negative/A-2	3
Integrys Energy Group Inc.	A-/Negative/A-2	5
Spectra Energy Capital LLC	BBB+/Stable/A-2	4
Energen Corp.	BBB+/Stable/--	7
OGE Energy Corp.	BBB+/Stable/A-2	6
E.ON U.S. LLC	BBB+/Stable/--	6
Alliant Energy Corp	BBB+/Stable/A-2	5
Sempra Energy	BBB+/Stable/A-2	7
Otter Tail Corp.	BBB+/Stable/--	8
Centennial Energy Holdings Inc.	BBB+/Stable/A-2	8
Constellation Energy Group Inc.	BBB+/Negative/A-2	7
Exelon Corp.	BBB+/CW-Neg/A-2	7
Duke Energy Corp.	BBB/Positive/--	6
Cinergy Corp.	BBB/Positive/A-2	6
Dominion Resources Inc.	BBB/Positive/A-2	7
PEPCO Holdings Inc.	BBB/Stable/A-2	5
DPL Inc.	BBB/Stable/--	6
DTE Energy Co.	BBB/Stable/A-2	6
PPL Corp.	BBB/Stable/--	7
FirstEnergy Corp.	BBB/Stable/--	7
Public Service Enterprise Group Inc.	BBB/Negative/A-3	7
Cleco Corp.	BBB/Negative/--	6
Hawaiian Electric Industries Inc.	BBB/Negative/A-2	6
Entergy Corp.	BBB/Negative/--	6
Great Plains Energy Inc.	BBB/CW-Neg--	7
Edison International	BBB-/Stable/--	6
Potomac Capital Investment Corp.	BBB-/Stable/--	8
Black Hills Corp.	BBB-/Negative/--	8
TXU Corp.	BBB-/CW-Neg/--	7
Allegheny Energy Inc.	BB+/Positive/B-2	7
Avista Corp.	BB+/Positive/B-1	6
CMS Energy Corp.	BB/CW-Pos/B-1	6
New York Water Service Corp.	BB/CW-Pos/--	7
TECO Energy Inc.	BB/Stable/B-1	5
5. Energy Merchants/Power Developers/Trading and Marketing		
FPL Capital Inc.	A/Stable/--	8

U.S. Utility And Power Ranking List (cont.)		
KeySpan Generation LLC	A/CW-Neg/--	5
Southern Power Co.	BBB+/Stable/A-2	6
Alliant Energy Resources Inc.	BBB+/Stable/--	7
Exelon Generation Co. LLC	BBB+/CW-Neg/A-2	8
PPL Energy Supply LLC	BBB/Stable/A-2	8
PSEG Power LLC	BBB/Negative/--	8
AmerenEnergy Generating Co.	BBB/CW-Neg/--	9
Duke Energy Trading and Marketing LLC	BBB-/Stable/--	10
TXU Energy Co. LLC	BBB-/CW-Neg/--	8
Allegheny Energy Supply Co. LLC	BB+/Positive/--	8
Cogentrix Energy Inc	BB-/Stable/--	6
Covanta Energy Corp.	BB-/Stable/--	6
AES Corp. (The)	BB-/Stable/--	8
Edison Mission Energy	BB-/Stable/--	9
Northeast Generation Co.	BB-/Stable/--	9
PSEG Energy Holdings LLC	BB-/Negative/B-2	9
NRG Energy Inc.	B+/Stable/B-2	9
Mirant Corp.	B+/CW-Neg/--	9
Reliant Energy Inc.	B/Positive/B-2	8
Orion Power Holdings Inc.	B/Positive/--	9
Reliant Energy Mid-Atlantic Power Holdings LLC	B/Positive/--	9
Dynegy Inc.	B/CW-Dev/B-2	8
Dynegy Holdings Inc.	B/CW-Dev/--	9
Calpine Corp.	D/--/--	9

Ratings And Ratios: Ratio Medians

The key ratio medians for U.S. corporates by rating category and their definitions are displayed below. The ratio medians are purely statistical, and are not intended as a guide to achieving a given rating level. They are not hurdles or prerequisites that should be achieved to attain a specific debt rating.

Caution should be exercised when using the ratio medians for comparisons with specific company or industry data because of differences in method of ratio computation, importance of industry or business risk, and the impact of mergers and acquisitions. Because ratings are designed to be valid over the entire business cycle, ratios of a particular company at any point in the cycle may not appear to be in line with its assigned debt ratings. Particular caution should be used when making cross-border comparisons, because of differences in accounting principles, financial practices, and business environments.

Company data are adjusted for the following:

Nonrecurring gains or losses are eliminated from earnings. This includes gains on asset sales, significant transitory income items, unusual losses, losses on asset sales, and charges because of asset writedowns, plant shutdowns, and retirement programs. These adjustments chiefly affect interest coverage, return, and operating margin ratios.

Unusual cash-flow items similar in origin to the nonrecurring gains or losses also are reversed.

The operating lease adjustment is performed for all companies. Companies that buy all plant and equipment are put on a more comparable basis with those that lease

Table 1—Key Industrial Financial Ratios, Long-Term Debt

Three-year (2002 to 2004) medians

	AAA	AA	A	BBB	BB	B	CCC
EBIT interest coverage (x)	23.8	19.5	8.0	4.7	2.5	1.2	0.4
EBITDA interest coverage (x)	25.5	24.6	10.2	6.5	3.5	1.9	0.9
FFO/total debt (%)	203.3	79.9	48.0	35.9	22.4	11.5	5.0
Free operating cash flow/total debt (%)	127.6	44.5	25.0	17.3	8.3	2.8	(2.1)
Total debt/EBITDA (x)	0.4	0.9	1.6	2.2	3.5	5.3	7.9
Return on capital (%)	27.6	27.0	17.5	13.4	11.3	8.7	3.2
Total debt/total debt + equity (%)	12.4	28.3	37.5	42.5	53.7	75.9	113.5

Table 2—Key Utility Financial Ratios, Long-Term Debt

Three-year (2002 to 2004) medians

	AA	A	BBB	BB	B
EBIT interest coverage (x)	4.4	3.1	2.5	1.5	1.3
FFO interest coverage (x)	5.4	4.0	3.8	2.6	1.6
Net cash flow/capital expenditures (%)	86.9	76.2	100.2	80.3	32.5
FFO/average total debt (%)	30.6	18.2	18.1	11.5	21.6
Total debt/Total debt + equity (%)	47.4	53.8	58.1	70.6	47.2
Common dividend payout (%)	78.2	72.3	64.2	68.7	(4.8)
Return on common equity (%)	11.3	10.8	9.8	4.4	6.0

Table 3—Key Ratios

Formulas

1. EBIT interest coverage	Earnings from continuing operations* before interest and taxes/Gross interest incurred before subtracting capitalized interest and interest income
2. EBITDA interest coverage	Adjusted earnings from continuing operations** before interest, taxes, depreciation, and amortization/Gross interest incurred before subtracting capitalized interest and interest income
3. Funds from operations (FFO)/total debt	Net income from continuing operations, depreciation and amortization, deferred income taxes, and other non-cash items/Long-term debt§ + current maturities + commercial paper, and other short-term borrowings
4. Free operating cash flow/total debt	FFO – capital expenditures – (+) increase (decrease) in working capital (excluding changes in cash, marketable securities, and short-term debt)/Long-term debt§ + current maturities, commercial paper, and other short-term borrowings
5. Total debt/Total debt + equity	Long-term debt§ + current maturities, commercial paper, and other short-term borrowings/Long-term debt§ + current maturities, commercial paper, and other short-term borrowings + shareholders' equity (including preferred stock) + minority interest
6. Return on capital	EBIT/Average of beginning of year and end of year capital, including short-term debt, current maturities, long-term debt§, non-current deferred taxes, minority interest, and equity (common and preferred stock)
7. Total debt/EBITDA	Long-term debt§ + current maturities, commercial paper, and other short-term borrowings/Adjusted earnings from continuing operations before interest, taxes, and D&A

*Including interest income and equity earnings, excluding nonrecurring items. **Excludes interest income, equity earnings, and nonrecurring items; also excludes rental expense that exceeds the interest component of capitalized operating leases. §Including amounts for operating lease debt equivalent, and debt associated with accounts receivable sales/securitization programs.

part or all of their operating assets. The lease adjustment affects all ratios.

The net debt adjustment affects median ratios largely for the 'AAA' rating category, composed almost entirely of cash-rich pharmaceutical companies.

The captive-finance adjustment has a great effect, mainly on automobile, department store, and some capital goods companies.

The adjusted ratio median universe for industrials includes about 1,000 companies. The data exclude transportation companies that exhibit different financial-ratio profiles.

The medians themselves are affected by economic and environmental factors, as well as mergers and acquisitions. The universe of rated companies constantly is changing, and in certain rating categories, adding or deleting a few companies also can affect the financial-ratio medians.

Strengths and weaknesses in different areas have to be balanced and qualitative factors evaluated. There are many nonnumeric distinguishing characteristics that determine a company's creditworthiness (*see Tables 1, 2, and 3*). ■

National Fuel Gas Distribution Corporation
Case 07-G-0141
Determination of Distribution's Hypothetical Equity Ratio
Assuming A-/BBB+ Credit Ratings

Credit Rating	Debt Ratio %		Equity Ratio %
A	53.8	a	46.2
A-	*54.6*	b	45.4
BBB+	*55.3*	b	44.7
BBB	**56.1**	**a**	43.9
A-/BBB+ Rating			
Average Debt Ratio	**55.0**		
Average Equity Ratio			**45.05**

[a] S&P Corporate Ratings Criteria 2006, page 43, Table 2 entitled "Key Utility Financial Ratios, Long Term Debt"

[b] Interpolated data

National Fuel Gas Distribution Corporation
Case 07-G-0141
Determination of Distribution's Hypothetical Equity Ratio
Assuming a Business Profile Score of 3 and A-/BBB+ Credit Ratings

Business Profile Score	Credit Rating	Debt Ratio Range Low %	High %	
3	A	50	55	a
3	A-	*51.66*	*58.33*	b
3	BBB+	*53.33*	*61.66*	b
3	**BBB**	**55**	**65**	**a**
A-/BBB+ Rating				
Average Debt Ratio		**52.5**	**60.0**	
Average Equity Ratio		**47.5**	**40.0**	

[a] Data from S&P's Utilities and Perspectives, "Revised Financial Guidelines," page 5, Table 1, June 7, 2004. See Witness Hanley Exhibit__(FJH-1), Schedule2, page 14 of 15.

[b] Interpolated data

National Fuel Gas Distribution Corporation
Case 07-G-0141
Determination of Distribution's Hypothetical Equity Ratio
Assuming a Business Profile Score of 4 and A-/BBB+ Credit Ratings

	Business Profile Score	Credit Rating	Debt Ratio Range Low %	High %	
	4	**A**	**45**	**52**	**a**
	4	A-	*47.33*	*55.33*	b
	4	BBB+	*49.66*	*58.66*	b
	4	**BBB**	**52**	**62**	**a**
A-/BBB+ Rating					
Average Debt Ratio			**48.5**	**57.0**	
Average Equity Ratio			**51.5**	**43.0**	

[a] Data obtained from Standard & Poors' Utilities and Perspectives, "Revised Financial Guidelines," Table 1, page 5, June 7, 2004. See Witness Hanley Exhibit__(FJH-1), Schedule2, page 14 of 15.

[b] Interpolated data

National Fuel Gas Distribution Corporation
Case 07-G-0141
Capital Structure and Related Ratios
as per Subsidiary Adjustment - ($000)

	(a) Regulated Capital NFGD w/ CDs	(b) Ratios	Regulated Capital NFGD 44.35% Equity Ratio	Ratios
Long-term Debt	$443,822	47.79%	$422,891	45.54%
Short-term Debt	90,903	9.79%	$86,616	9.33%
Total Debt	$534,725	57.58%	$509,507	54.86%
Customer Deposits	$7,320	0.79%	$7,320	0.79%
Common Equity	$386,665	41.63%	$411,883	44.35%
Total Capital	$928,710	100.00%	$928,710	100.00%

	928,710
	411,883
	7,320
	509,507
LTD	422,891
STD	86,616

National Fuel Gas Distribution Corporation
Case 07-G-0141
Commercial Paper Rated A2/P2
Average Rate for the Month of April 2007

Date	Rates
4/2/2007	5.31
4/3/2007	5.34
4/4/2007	5.39
4/9/2007	5.34
4/10/2007	5.33
4/11/2007	5.34
4/12/2007	5.34
4/13/2007	5.35
4/16/2007	5.37
4/17/2007	5.31
4/18/2007	5.35
4/19/2007	5.32
4/20/2007	5.34
4/23/2007	5.33
4/24/2007	5.33
4/25/2007	5.31
4/26/2007	5.30
4/27/2007	5.32
Average	**5.33**

National Fuel Gas Distribution Corporation
Case # 07-G-0141

Cost of Short-Term Debt

Term	Average Balance	Effective Interest Rate	Annual Cost	Composit Interest Rate
Short-Term Debt	$ 163,894,920	5.33%	$ 8,735,599	
Committed Line of Credit Fee			$ 560,395	
Total Short-Term Debt	$ 163,894,920		$ 9,295,994	5.67%

STATE OF NEW YORK

Public Service Commission

Patricia L. Acampora, Chairwoman

Three Empire State Plaza, Albany, NY 12223
Further Details: James Denn, (518) 474-7080
http://www.dps.state.ny.us
FOR RELEASE: IMMEDIATELY 07027/03-E-0640;06-G-0746

PSC SEEKS MORE EFFICIENT ENERGY USE

-Utility Revenue Decoupling Mechanisms to Eliminate Disincentives-

Albany, NY—4/18/07—The New York State Public Service Commission (Commission) today directed the state's major electric and gas utilities to develop proposals for true-up based delivery service revenue decoupling mechanisms. These ratemaking changes are intended to enhance the achievement of customer-initiated efficient energy use by reducing or eliminating disincentives that may discourage utilities from actively promoting customer investments in energy efficiency, renewable technologies and distributed generation. The proposals would be considered in ongoing and future rate cases.

"To the extent current design of utility delivery rates continue to link the recovery of utility fixed costs, including profits, to the volume of actual sales, disincentives exist that limit the utilities' interest in promoting efficient energy use," said Commission Chairwoman Patricia L. Acampora. "Creating a mechanism to reduce or eliminate the dependence of utilities' revenues on sales, would thereby increase the utilities' interest in the promotion of customer-initiated more efficient energy use. The resulting public benefits from new energy efficiency programs, renewable technologies and distributed generation could be substantial. Energy efficiency improvements, in particular, limit unnecessary load growth and delay or possibly avoid the installation of costly, new distribution, transmission or generation facilities."

The Commission initiated a proceeding in 2003 to investigate potential electric delivery rate disincentives against the promotion of energy efficiency, renewable technologies and

distributed generation as part of an overall state program to facilitate customer access to existing and developing technologies for the clean production and/or conservation of energy. Subsequently in 2006, the Commission established a separate proceeding expanding its inquiry to include the gas utilities. A Notice of Proposed Rulemaking concerning each of the two proceedings was published in the State Register on July 12, 2006, in accordance with the State Administrative Procedure Act. Several interested parties filed comments in the proceedings.

Based upon a thorough review of the comments, the Commission today determined that properly designed utility revenue decoupling mechanisms are needed at this time to address potential disincentives to utilities' promoting and implementing more efficient energy use. The Commission will be requiring the utilities to develop mechanisms that true-up forecast and actual delivery service revenues resulting in significantly reduced or eliminated disincentives caused by the ongoing recovery of utility fixed delivery costs via volumetric (per kWh) rates and marginal consumption blocks. The true-up would include, among other things, any net lost revenues attributable to the achievement of more efficient energy use. The true-up would be considered no less frequently than once per year.

The Commission will be requiring the utilities to file revenue decoupling proposals in ongoing and new rate cases so that the utilities, staff of the Department of Public Service, and interested parties may consider utility-specific circumstances and customer bill impacts within service classifications before their implementation. Also, the utilities are encouraged to continue to implement cost-based delivery rate design improvements and hourly pricing tariffs for commodity service where appropriate.

In addition to the implementation of broad-based revenue decoupling mechanisms that incorporate appropriate true-ups, the Commission today stated that the promotion of customer-sited renewable resources and distributed generation technologies should be addressed through greater vigilance on the part of the utilities regarding the proper application and administration of their interconnection rules and procedures, as well as the expanded application of existing electric and gas standby delivery rate structures.

The Commission will issue a written order reflecting today's decision. That order, when available, can be obtained from the Commission's Web site at http://www.dps.state.ny.us by accessing the Commission Documents section of the homepage and referencing Cases 03-E-0640 and 06-G-0746. Many libraries offer free Internet access. Commission orders can also be obtained from its Files Office, 14th floor, Three Empire State Plaza, Albany, NY 12223 (518-474-2500).

-30-

DPS-240
Witness: Hanley
Page 1 of 1

NATIONAL FUEL GAS DISTRIBUTION CORPORATION
NEW YORK DIVISION
RESPONSE TO FOURTEENTH SET OF
FORMAL STAFF REQUEST FOR INFORMATION
CASE 07-G-0141

240. Relative to Table 7-7 mentioned above, please provide the beta for Distribution, and the average beta for the Proxy Group of Seven Value Line Gas Distribution Companies and for the Proxy Group of Six Gas Distribution Companies.

Response:

There is no market data for Distribution with which to calculate a beta from 1926-2005 in the same manner as the betas shown on Table 7-7. As for the two proxy groups, Mr. Hanley does not have the data necessary from 1926-2005 to calculate a beta in the same manner as the betas shown on Table 7-7.

FORTUNE

9% Forever?

That's economist Roger Ibbotson's forecast for stock market returns. HE'S BEEN RIGHT--very right--in the past. So how come some people think we shouldn't believe him anymore?

By JUSTIN FOX
December 26, 2005

(FORTUNE Magazine) – In May 1974, in the depths of the worst bear market since the 1930s, two young men at a University of Chicago conference made a brash prediction: The Dow Jones industrial average, floundering in the 800s at the time, would hit 9,218 at the end of 1998 and get to 10,000 by November 1999.

You probably have a good idea how things turned out: At the end of 1998, the Dow was at 9,181, just 37 points off the forecast. It hit 10,000 in March 1999, seven months early. Those two young men in Chicago in 1974 had made one of the most spectacular market calls in history.

What became of them after that? One, Rex Sinquefield, went on to found a mutual fund company that now manages more than $80 billion. The other, Roger Ibbotson, kept making market forecasts, forecasts of long-run stock and bond returns that have become deeply woven into the fabric of American life. Simply put, if you believe that stocks are fated to return 10% on average over the long haul, Ibbotson is probably the reason why.

It's hard to overestimate the influence of those numbers. The forecasts and historical return data churned out by Ibbotson Associates transformed the pension fund business in the late 1970s and 1980s, leading managers to make an epic shift out of bonds and into stocks. They formed the inescapable backdrop to the 1990s personal investing boom, as brokers, financial planners, and journalists endlessly repeated the Ibbotson mantra of double-digit stock market returns as far as the eye could see. Lately the Ibbotson forecasts have been finding their way into 401(k)s, as Ibbotson and other firms using similar methods build portfolios for those who opt not to build their own. Ibbotson even sells hundreds of thousands of charts each year showing how stocks build wealth over time--and beat the crap out of bonds.

All this means it's of more than academic interest that an academic debate has been raging for years now over the theories upon which Ibbotson and Sinquefield based their forecast in 1974, and which Ibbotson has followed since. Ibbotson, now 62, has taken some of the criticism to heart, and in the process ratcheted down his long-run forecast for stock returns from more than 10% a year to 9.27%. That alone was something of a shock for many of his clients, Ibbotson says. But a few critics think the real number may turn out to be just 5% or 6%. In that case stocks would barely outperform government bonds--an eventuality that would entirely rearrange the investing world yet again.

***

The most important thing to understand about the forecast that Roger Ibbotson and Rex Sinquefield churned out in 1974 is that it wasn't an attempt to outsmart or outguess the market as Wall Street seers had traditionally done. Instead, Ibbotson and Sinquefield were simply trying to use the information already embedded in stock prices to, as they put it, "uncover the market's 'consensus' forecast." Their tools were a half-century of historical data and the bold new philosophy of stock market behavior that they had internalized as students at the University of Chicago's Graduate School of Business.

They did it at a time when theories batted about in Chicago classrooms really were changing the world, or were about to. In the early 1970s, Ibbotson says, "everything was going on at the University of Chicago." The professors on his Ph.D. dissertation committee included two future Nobel Prize winners (Merton Miller and Myron Scholes), another who would have won if he hadn't died before the Nobel committee got to him (Fischer Black), yet another whom many colleagues think should win the Nobel (Eugene Fama), and a father of Reagan-era supply-side economics (Arthur Laffer).

Not counting the Black-Scholes options-pricing formula and the Laffer curve, which don't have major roles in this drama, the biggest ideas at the Chicago Business School in the early 1970s were the efficient-market hypothesis and the capital asset pricing model. The gist of the efficient-market idea, as articulated in the 1960s by Eugene Fama, is that today's price is the best possible measure of a stock's value, and that nobody can reliably predict which way prices will be headed tomorrow. The capital asset model says that you nonetheless can predict long-run stock returns because they are a reward for taking risks, and those risks can be measured.

While CAPM, as it is known, was devised elsewhere, Chicago's Fischer Black was among its most fervent adherents.

Ibbotson arrived on campus in 1968. He was a kid from the Chicago suburbs who studied math and physics at Purdue and got an MBA at Indiana University. After struggling in the workforce, he went to Chicago to earn a Ph.D. in finance and hit his stride. While still a student, he got a job managing the university's bond portfolio. Meanwhile his friend Sinquefield, a 1972 MBA working at a Chicago bank, was launching one of the first S&P 500 index funds for institutional investors (this when Vanguard was still but a gleam in Jack Bogle's eye). Chicago really was a heady place for young finance geeks in those days.

Ibbotson and Sinquefield both needed up-to-date historical data on security prices for their work, and both knew that the professors who ran the Chicago business school's Center for Research in Security Prices (CRSP) were in no hurry to repeat the epic number-crunching exercise they had undertaken in the early 1960s to build a database of stock prices going back to 1925. So the two men took on the job of updating the CRSP (pronounced "crisp") stock database and assembling a similar price history for bonds and Treasury bills.

They presented their preliminary findings in May 1974 at one of the twice-yearly seminars that CRSP hosted to share the latest academic research with bankers, mutual fund managers, and the like. "Just getting the data was a coup," Ibbotson says. Then there was the forecast, suggested to them by Fischer Black. Black thought of using the data to calculate the additional return that investors had historically received for investing in risky stocks rather than in relatively safe government bonds. According to CAPM theory, this "risk premium" reflects something real and durable about the rewards investors demand for taking the chance of losing money. Real and durable enough, it seemed in 1974, to build a stock market prediction on.

Once Ibbotson and Sinquefield figured out the historical risk premium, all they had to do was add it to the prevailing risk-free interest rate (Treasury bonds or bills, depending on one's planning horizon) to get the "consensus" forecast of market returns. Actually they made it a little more complicated than that: When they finally published their work in 1976, they presented their forecast as the middle point of a wide range of different possible results. The mean forecast for the 25 years through 2000 was for 13% annual stock market returns, with 95% confidence that the return would be between 5.2% and 21.5%. (The actual return was 15%.)

"In some ways it was the first scientific forecast of the market," Ibbotson says proudly. Not everyone saw it that way at the time; some skeptics complained it was just a gussied-up extrapolation of the past into the future. But there turned out to be a ravenous hunger for such data. Both researchers were swamped with requests for more information and advice. For a while Ibbotson, by this time a very junior professor of finance at Chicago, just let the letters pile up unopened in a drawer in his office. In 1977 he decided to make a business out of his research project and started Ibbotson Associates. He also kept teaching at Chicago—until 1984, when his wife, health economist Jody Sindelar, got a job at Yale and he wangled an appointment there as a finance professor. Since then he's left the day-to-day management of the company, still based in Chicago, in the hands of others, while he remains its public face and chief researcher. Sinquefield, meanwhile, launched small-cap index fund manager Dimensional Fund Advisors with another Chicago finance graduate, David Booth, in 1981.

***

While Ibbotson Associates grew and prospered in the 1980s and 1990s, however, the theories upon which its forecasts are based began to crumble in the face of contradictory evidence. The initial onslaught came from skeptics of the efficient-market hypothesis like Ibbotson's Yale colleague Robert Shiller, who argued that investor mood swings drove stock prices too high or too low for years on end. The experience of the late 1990s confirmed to many that there was something to this. But Ibbotson says he can't base his forecasts on such arguments. "It's not that I believe markets are so efficient," Ibbotson says. "It's just that I don't want to use a mispricing to make predictions." He's trying to divine a middle-of-the-road consensus, not trot out a CNBC-style market call. Fair enough.

A harder-to-dismiss critique came from Mr. Efficient Markets himself, Ibbotson's dissertation advisor Eugene Fama. In a series of papers written with Dartmouth's Kenneth French, Fama has argued that the capital asset pricing model, or at least its 1970s corollary that the risk premium is constant, doesn't match the facts. "My own view is that the risk premium has gone down over time basically because we've convinced people that it's there," Fama says. Ibbotson's stock market forecasting model is thus a victim of its own success.

Ibbotson agrees that Fama has a point, and that he can no longer bank on the historical equity premium to predict future returns. The alternative he has come up with is an estimate based on fundamentals. He takes the 10.31% annual return on stocks from 1925 through the present and strips out the tripling of the market's price/earnings ratio that's occurred since then. "We think of that as a windfall that you shouldn't get again," he says. The drivers of stock returns that remain are dividends, earnings growth, and inflation. Make a forecast of future inflation using current bond yields, assume that dividend and earnings growth history will repeat themselves, and you get a long-run equity-return forecast of 9.27%. When Ibbotson and his company's director of research, Peng Chen, first ran the numbers in 2001, the gap between the new forecast and the one using the equity premium method was more than a percentage point. Because P/Es have dropped since then, the gap has shrunk. But Ibbotson's revised forecasting method doesn't insulate him from criticism any more than the old way. In fact, it invites new criticism.

The most persistent challenger has been Rob Arnott, a Pasadena money manager and editor of the Financial Analysts Journal, who

thinks future equity returns could be below 6%. (See "Dueling Market Forecasts" chart.) The big difference between his forecast and Ibbotson's is that Arnott uses the current dividend yield (1.76%) as a starting point, while Ibbotson goes with the much higher long-term average yield (4.23%). Ibbotson believes the historical number provides a better picture of what investors think is ahead. He still relies on the assumption that markets are efficient, so current dividend yields must be low for a reason--his guess is that investors are expecting big growth in earnings (and dividends) in the future. Arnott, whose research has shown that low yields in the past were followed by slow earnings growth, thinks that's balderdash. "One of my biggest beefs with the academic community is the notion that theory is fact," he complains. "When they find evidence that contradicts the theory, instead of saying, 'Wonderful, let's improve the theory,' they throw it out because it conflicts with theory."

But the theoretical assumption that the market knows best is central to Ibbotson's whole forecasting endeavor, something even Arnott acknowledges. "In a sense Ibbotson is trying to infer what the consensus view is," Arnott says. "I'm trying to profit from that consensus." What Ibbotson is telling us is that the market still believes stocks will handily outperform bonds over the long haul. And if the market turns out to be wrong about that, it won't just be Roger Ibbotson who feels the pain.

FEEDBACK jfox@fortunemail.com

National Fuel Gas Distribution Corporation
Case 07-G-0141
Recast of Witness Hanley's
Common Equity of Cost Rate

Line No.	Principal Methods	Proxy Group of Six Gas Distribution Companies		Proxy Group of Seven Value Line Gas Distribution
1	Discount Cash Flow Method	8.65%		9.24%
2	Risk Premium Method	0		0
3	Capital Asset Pricing Model	10.47%		10.41%
4	Comparable Earnings Analysis	0		0
5	A. Indicated Common Equity Cost Rate Before Adjustments for Unique Risk	9.56%		9.83%
	B. Adjusted Discounted Cash Flow Results (DCF)	0		0
6	Indicated Range of Common Equity Cost Rate Before Adjustments for Unique Risk	9.56%		9.83%
	Indicated Range of Common Equity Cost Rate Before Adjustments for Unique Risk		9.7%	
8	Adjustments for Unique Risk Due to Small Size		0.0%	
9	Indicated Range of Common Equity Cost Rate Before Adjustments for Unique Risk		9.7%	
10	Recommended Range of Common Equity Cost Rate		9.45% - 9.95%	

Listing of Expert Witness Experience of Audrey L. Capers

I have testified as a Staff witness and/or participated as part of a negotiation team in water, telecommunications, gas, steam and electric rate proceedings. The rate cases/settlements in which I have addressed rate of return issues (i.e., capitalization ratios, cost rates, and financial integrity) include the following:

Case Number	Company	Issues
28749	Alltel New York, Inc. (June 1984)	Fair rate of return and determination of issuance costs
	Connecticut-American Water Company (July 1984)	Testified before The Department of Public Utility Control of the State of Connecticut on the fair rate of return for the company
28901	New York Water Service Corporation-Merrick District (January 1985)	Fair rate of return
28911	New York-American Water, Inc. (February 1985)	Fair rate of return
28961	New York Telephone Company (March 1985)	Issuance costs required to market new common stock and its flotation cost adjustments in utility rates
28993	The Citizens Water Supply Company of Newton (April 1985)	Fair rate of return
29069-70	Niagara Mohawk Power Corporation (August 1985)	Fair rate of return for electric and gas operations
29189-91	Rochester Gas & Electric Corporation (December 1985)	Fair rate of return for electric and gas operations

Case Number	Company	Issues
29327-28	Niagara Mohawk Power Corporation (August 1986)	Fair rate of return for electric and gas operations; appropriate capital structure to reflect Nine Mile 2 disallowance; and the removal of the common equity attributable to company's unregulated business
29327	Niagara Mohawk Power Corporation (November 1990)	Company's failure to control its cost and the rationale of its self-assessment program
91-G-0846	National Fuel Gas Corporation (January 1992)	Fair rate of return
92-C-0272	New York Telephone Company (NYT) (May 1993)	Panel testimony (with Margaret Savage and Richard Schuler), defining the market for directory services; scope of directory market and how the nature of the business impacted the Directory Licensing Agreement between New York Telephone and NYNEX Information resources Company (NIRC); the effect of the developing electronic directory business on NYT's obligation to provide directory services, and the organizational structure that would best support the provision of the services.

Case Number	Company	Issues
93-G-0996 and 93-S-0997	Consolidated Edison Company of New York, Inc. - Gas & Steam Operations (September 1994)	Panel testimony (with Steve Blaney, John Dowling, Frances Hart, Francis Radigan and Steven Van Cook) that presented a multi-year (2 and 3 years) rate plan for the company.
94-E-0334	Consolidated Edison Company of New York, Inc. - Electric Operations (September 1994)	Panel testimony (with John Dowling, Andrew Harvey and William Mills) that presented a three-year rate plan for the company based on RPC (revenue per customer) methodology. Plan included goals, criteria and incentives.
96-S-1065	Consolidated Edison Company of New York, Inc. - Steam Operations (April 1997)	Three-year Joint Proposal - fair rate of return
99-S-1621	Consolidated Edison Company of New York, Inc. - Steam Operations (March 2000)	Fair rate of return
02-M-0132 01-T-1474 02-T-0036	The Siting of Transmission Facilities proposed to be located at the West 49th Street Substation of Consolidated Edison Company of New York, Inc. (April 2002)	Recommendation that the NYS PSC carefully consider the financial and organizational structure of applicants in granting "Certificates of Environmental Compatibility and Public Need" due to the unique circumstances in the Manhattan service territory of Con Edison. Reviewed circumstances of PSEG Power Cross Hudson Corporation and Neptune Regional Transmission System LLC.
Case		

Number	Company	Issues
02-G-1553	Orange & Rockland Utilities, Inc. (March 2003)	Fair rate of return (Multi-year Joint Proposal)
04-G-1047	National Fuel Gas Distribution Corporation	Fair Rate of Return (Multi-year Joint Proposal)
05-E-0934 05-G-0935	Central Hudson Gas & Electric Corporation	Fair Rate of Return (Multi-year Joint Proposal)