Cash Flow Considerations: In Ratemaking and Mergers

A Report to:

The Delaware Public Service Commission

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I. Introduction

The Delaware Public Service Commission ("DPSC") retained Snavely King Majoros & Associates, Inc. (the "firm" or "SKM") to conduct research concerning cash flow issues relating to future rate case and merger proceedings. The research addresses the areas of cash flow, cash flow relief, free cash flow and their effects. SKM retained Analytica94 ("A94"), a non-profit research and training organization, to conduct an independent survey of stakeholders concerning their understanding and general opinions of cash flow issues. A94 in turn, retained Left-Brain Concepts, Inc. ("LBC") to conduct the independent survey. The Left Brain Survey is Attachment A to this Report.

II. Specific Assignment

The DPSC retained SKM to perform the following services:

- Consultant will be researching the areas of cash flow, cash flow relief and free cash flow and their effects
- The research will address the relationship of cash flow to the current rate base rate of return ratemaking model
- Whether cash flow should be considered in a merger or rate case proceeding, and
- What is the cash value of a proposed merger

SKM conducted several analyses and substantial research, all of which is discussed below. The proposed Exelon/PHI merger provides an excellent foundation for much of this research.

III. Summary of Conclusions

We conclude that Public Utility Commissions should consider a utility's cash flow in ratemaking and merger proceedings. While many survey respondents conclude that cash flow should support plant additions; we conclude that a public utility's cash basis returns and rates of return exceed substantially their accrual basis returns. We conclude that Commissions should consider both accrual basis returns and cash basis returns when confronted with claims for additional cash flow for future additions or as a result of experienced attrition. A public utility's free cash flow weighs at least as much as other benchmarks such as profit margins, dividend yields, return on equity, return on assets, and sustainable growth forecasts In the financial community. Just as free cash flow is an important factor in the financial community it is also important to ratepayers. The ratepayers' discount rate, which is greater than the utility's cost of capital, is appropriate for considering the costs and benefits of higher cash basis returns.

IV. Stakeholder Survey - Key Findings

By design, participants represented a range of stakeholders that consisted of advocates, public utility regulators and senior management at public utilities. LBC sent 149 postal service letters inviting people to participate. Recipients of the letters consisted of 52 senior officials at individual state public service commissions at the National Association of Regulatory Utility Commissioners ("NARUC"), 54 senior officials at individual state consumer advocate

organizations at the National Association of State Utility Consumer Advocates ("NASUCA"), 40 public utilities and senior staff at the Edison Electric Institute, American Gas Association and one senior official at the Federal Energy Regulatory Commission. Respondents were offered to receive a copy of the results of the survey but did not receive any monetary compensation.

A total of 23 people completed the survey for a response rate of 15%. This is a good response rate for an unsolicited survey. As reported by market research trade associations, American Association for Public Opinion Research ("AAPOR") and Council of American Survey Research Organizations ("CASRO"), most surveys of this nature realize about a 5% response. Below are the areas looked at in the survey. More detail may be found in Attachment A - the Survey Report.

Relationship of cash flow to rates for service: Most respondents felt that rates for service should allow for an adequate cash flow – to service obligations, for capital expenditures and new investments, for financial integrity, to facilitate access to credit, to cover operating expenses, to service long term debt, and to avoid or at least reduce the need for financing. A few said that there is no relationship.

Relationship of cash flow to rate of return model: People gave similar responses as above. In fact, many replied - "see previous response."

Consideration of cash flow in mergers: More people feel that consideration should be given to a public utility's cash flow in mergers. Respondents cited that a positive cash flow allows a utility to invest in infrastructure, to provide value to customers, to increase access to and lower the cost of capital and to represent the strength or weakness of a utility.

Consideration of cash flow in rate case proceedings: Fewer people believe that consideration should be given to a public utility's cash flow in rate case proceedings. However, comments included that a strong cash flow will allow a utility to make infrastructure investments, that it drives credit ratings and that it helps determine a utility's overall rate of return.

Consideration of free cash flow to rate case proceedings: People gave responses similar to the previous question - that free cash flow should be one, but not the only variable, that is considered and that it is an aspect of the financial strength of a utility.

¹ Attachment A - Public Utility Stakeholder Survey, Left Brain Concepts, Inc. December 2014, Background

Determining cash value in mergers: Most replied that the cash value is the net present value of future cash flows which takes into account income, spending, debt, sale of assets and other investment options. A couple of people said that they follow best practices and advice from investment banking firms in determining the cash value of a utility.

Identification of Organization: Respondents consisted of two senior staff at public utilities, six consumer advocates and nine public utility regulators. Six people did not respond to the question.

Identification of Membership in Trade Organizations: One respondent works at the Edison Electric Institute, seven were from NARUC and five were from NASUCA. Ten people did not respond to the question.

Most respondents believe there is or should be a relationship between a public utility's cash flow and its rates for service; and those rates should allow for adequate *cash flow* to service obligations, including capital additions. Other people think a public utility's *cash flow* is or should be considered within the rate of return model. Some people believe *free cash flow* should be one, but not the only variable considered in a rate case. Many people believe a public utility's *cash flows* should be considered in a merger. Finally, most people believe that in a merger, *cash value* is the *net present value of future cash flows* taking into account income, spending, debt, sale of assets and other investment options.

V. Cash Flow - Definitions

Cash flow according to Wikipedia:

Cash flow ("CF") is the movement of <u>money</u> into or out of a business, project, or financial product. It is usually measured during a specified, limited period of time. Measurement of cash flow can be used for calculating other parameters that give information on a company's value and situation. Cash flow can be used, for example, for calculating parameters: it discloses cash movements over the period.

- To determine a project's <u>rate of return</u> or value. The time of cash flows into and out of projects are used as inputs in financial models such as internal rate of <u>return</u> and <u>net present value</u>.
- To determine problems with a business's <u>liquidity</u>. Being profitable
 does not necessarily mean being liquid. A company can fail
 because of a shortage of cash even while profitable.
- As an alternative measure of a business's profits when it is believed that <u>accrual accounting</u> concepts do not represent economic

realities. For instance, a company may be notionally profitable but generating little operational cash (as may be the case for a company that barters its products rather than selling for cash). In such a case, the company may be deriving additional operating cash by issuing shares or raising additional debt finance.

- Cash flow can be used to evaluate the 'quality' of income generated by <u>accrual accounting</u>. When net income is composed of large noncash items it is considered low quality.
- To evaluate the risks within a financial product, e.g., matching cash requirements, evaluating default risk, re-investment requirements, etc.²

Cash flows are, according to Investopedia:

- 1. A revenue or expense stream that changes a cash account over a given period. <u>Cash inflows usually arise from one of three activities financing, operations or investing</u> although this also occurs as a result of donations or gifts in the case of personal finance. Cash outflows result from expenses or investments. This holds true for both business and personal finance.
- 2. An accounting statement called the "statement of cash flows", which shows the amount of cash generated and used by a company in a given period. It is calculated by adding noncash charges (such as depreciation) to net income after taxes. Cash flow can be attributed to a specific project, or to a business as a whole. Cash flow can be used as an indication of a company's financial strength.³

VI. Cash Flow Relief

Cash flow relief is different than operating income relief resulting from a failure to earn the allowed accrual basis rate of return on rate base. Cash flow relief is a request for more cash, regardless of accrual basis earnings. Some public utilities cite inadequate cash flow as a driving force of revenue requirement increases. For example some utilities threaten to defer needed infrastructure investment if they are not provided cash flow relief. In Maryland Case No. 9299 re: Baltimore Gas and Electric Company ("BGE"), the Company's Vice President and Controller Mr. David Vahos stated:⁴

² Wikipedia (Online) as of January 23, 2015, http://en.wikipedia.org/wiki/Cash_flow

³ Investopedia Dictionary (Online) as of January 23, 2015, emphasis added,

http://www.investopedia.com/terms/c/cashflow.asp ⁴ At the time of that proceeding, BGE was a subsidiary of Constellation Energy, which was purchased by Exclon in 2011.

The recent Exelon merger creates the opportunity for BGE to provide customers with the net savings associated with the merger [Exelon].⁵

Mr. Vahos also stated:

As other Company witnesses have articulated in their testimony, the Company's rate relief request is driven by the need to generate the funds necessary to continue to provide safe and reliable service to our customers. As the Company continues to under earn its authorized rate of return, BGE's cash flow is simply insufficient.⁶

Mr. Vahos further stated:

Furthermore, the strength of the Company's balance sheet, cash flows, and access to capital must be considered.⁷

In the same proceeding, Mr. Carim Khouzami, BGE's Vice President, CFO and Treasurer stated:

BGE is able to access capital in three ways; it uses internally generated cash; it issues debt; and it raises equity. This capital is needed to finance the investments that have been discussed throughout the Company's application to increase base rates, as well as those being made in its Smart Grid Initiative (Smart Grid) and transmission infrastructure projects needed to comply with PJM Regional Transmission Expansion Plan (RTEP) requirements, as well as other transmission investments.⁸

Mr. Khouzami also stated:

The premise behind ratemaking is that BGE should be able to generate cash flow by being afforded the opportunity to recover its operating expenses and earn a fair and appropriate return on its invested capital.⁹

Mr. Khouzami further stated:

The other source of internal cash flow comes from the returns BGE earns on its investments. The cash flows generated by this return must first be used to make stated principal and interest payments to the Company's debt holders. Any additional returns then accrue to BGE and can be used to make investments in its business.

⁷ *Id.*, p. 6

9 Id.

⁵ Vahos Direct Testimony in Case No. 9299, List of Issues & Major Conclusions

⁶ *Id.*, p. 3

⁸ Khozami Direct Testimony in Case No. 9299, p. 8

However, as the Company continues to under earn its authorized rate of return, the amount of cash flow accruing to BGE is less. In fact, even if the full rate increase were to be authorized, BGE would still not generate enough internally generated cash flow in 2013 to service its debt and fund its investments, causing BGE to be even more reliant on the capital markets for funding."10

Public utilities derive internal cash flow from have three primary sources: depreciation, deferred income tax expense and operating income, each of which is collected from ratepayers. Utilities seek cash flow relief in the form of riders to cover attrition between rate cases, rate of return bumps, and higher depreciation rates among other sources.

Accrual Basis Operating Income VII.

Public Utility revenue requirements are based on Net Utility Operating Income ("NUOI"). 11 (FERC Form 1, pages 144 and 117) rather than "Net Income" or Earnings. 12 Utility operations produce NUOI and it is the number regulators use to measure rate of return on rate base. "Net Income" is the Utility's "bottom line," after non-utility operations and after interest expense on long-term debt. While these two income figures are easily confused, they are different significantly. One way to separate the two is to recognize that regulators address NUOI and investors are concerned with Net Income or Earnings. 13

Below is a simple hypothetical example designed to demonstrate a public utility's Cash Flow. 14 The revenue requirement or overall cost of service reflects accrual basis accounting (as opposed to cash basis accounting) drawn from the utility's annual Form 1 reports. The sum of a utility's costs, including return, translate into accrual basis operating revenues which are offset with accrual basis operating expenses yielding accrual basis Net Utility Operating Income. Accrual basis operating expenses include cash expenses such as payroll and they also include non-cash expenses such as depreciation, amortization and deferred income taxes.

VIII. Hypothetical Example - Accrual Basis Net Utility Operating Income

A Public Utility's Accrual Basis Operating Income (Return) is its "Net Utility Operating Income" as shown on the "Statement of Income" in its FERC Form 1. Accrual basis Net Utility Operating Income is Accrual Basis Operating Revenues minus Accrual Basis Operating Expenses.

¹¹ FERC Form 1, pp. 114 and 117

¹⁰ *Id.*, pp. 8-9

¹³ The FERC Cost of Service Formula excludes certain items like interest, which is accounted for in Net Income, but

⁴ This example is intended to be illustrative of certain concepts addressed in this Report: it is not intended to reflect an actual public utility's revenue requirement and cash flows.

Table 1 - Hypothetical Net Utility Operating Income

	Accrual Basis
Operating Revenues (accrual basis)	\$1,000
Less: Total Utility Operating Expenses (accrual basis)	(750)
Equals: Net Utility Operating Income = Accrual Basis Return	\$250

The \$250 of Net Utility Operating Income is the starting point for a rate case analysis of the cost of service.

Accrual-Basis operating expenses include both <u>cash expenses</u> and <u>non-cash expenses</u>. Major Non-cash expenses are Depreciation, Amortization and Deferred Taxes. For example:

Table 2 – Hypothetical Accrual Basis Operating Expenses

	Accrual Basis
Operating and Maintenance - Cash Expenses	\$300
Depreciation – Non-cash Expenses	250
Amortization – Non-cash Expenses	50
Deferred Taxes – Non-cash Expenses	150
Total Non-cash Expenses	<u>450</u>
Total Accrual Basis Operating Expenses	\$750

Non-cash expenses reduce accrual basis operating income, as shown above, but no actual cash flows out of the utility to pay non-cash expenses. Thus, accrual basis operating income is lower and must be adjusted to determine cash basis operating income. In the example, Cash Basis Net Utility Operating Income is determined by adding the non-cash expenses back to the Accrual Basis Net Utility Operating Income. For example:

Table 3 - Hypothetical Cash Basis Net Utility Operating Income

Net Utility Operating Income = Accrual Basis Return	\$250
Add Back Non-cash Expenses	450
Total Cash Basis Net Utility Operating Income = Cash Basis Return	\$700

While the \$700 cash basis return is much greater than the \$250 accrual basis return, most Public Utilities use the accrual basis amount to support requests for revenue increases and to measure attrition between rate cases.

IX. Actual Example

The adjustments to convert accrual basis operating income to cash basis operating income come from Form 1 Balance Sheets, Statements of Income, Statements of Cash Flows and Statements of Retained Earnings. Table 4 compares the accrual basis operating income to the cash basis operating income from Delmarva's, Baltimore Gas and Electric's, PEPCO's and Atlantic City Electric's 2013 FERC Form 1s.

Table 4 - Cash Basis v. Accrual Basis Net Utility Operating Income¹⁵

		Totals llions)			
			Atlantic		
	Delmarva	BGE	City	Pepco	Total
Net Utility Operating Income	\$140	\$326	\$114	\$246	\$826
Accrual Basis Rate of					
Return:					
Proprietary Capital	1,029	2,555	869	1,922	6,375
Long-Term Debt	1,072	2,245	1,070	1,899	6,285
Total Capital	2,101	4,800	1,939	3,821	12,661
Rate of Return	6.67%	6.79%	5.86%	6.44%	6.52%
Cash Basis Rate of Return:					
Depreciation	85	227	72	142	527
Amortization	0	36	(11)	3	28
Deferred Taxes and FTC	307	691	224	436	1,658
Cash Basis Operating Income	533	1,280	400	827	3,039
Rate of Return	25.37%	26.66%	20.61%	21.63%	24.00%

The accrual basis NUOI for the combined utilities is \$826 million and the accrual basis rate of return on total capital is 6.52 percent. Alternatively, the cash basis NUOI is \$3 billion and the cash basis return on total capital is 24.00 percent. It is not unreasonable to assume that these results would be true for most utilities.

BGE was an Exelon subsidiary in 2013 but Delmarva, PEPCO and Atlantic City Electric were not. Thus, BGE's NUOI contributed to Exelon's cash basis operating income in 2013. If Commissions approve the other mergers, it is not unreasonable that their cash flow will also contribute to Exelon's cash basis operating net income.

Table 5 summarizes Exelon's 2013 cash basis operating income and Table 6 summarizes Exelon's use of its cash basis operating income in 2013. Exelon's 2013 cash basis operating income was \$7.226 billion. From that, Exelon spent \$1.356 billion for interest expense, \$5.395 billion for plant additions and \$1.254 billion for dividends on common stock. There were small pluses and minuses for other items, but interest, capital addition and dividends were the big three.

¹⁵ Delmarva, BGE, Atlantic City Electric, and Pepco 2013 FERC For 1s

Table 5 – Exelon's 2013 Cash Basis Operating Income¹⁶

Cash Basis Operating Income	
Net Cash Flows Provided by Operating Income	\$ 6,343
Less: Net Income	(1,729)
Plus: Operating Income	3,656
Less: Income Taxes	(1,044)
Total Cash Basis Operating Income	\$ 7,226

Table 6 - Exelon's Use of Its 2013 Cash Basis Operating Income¹⁷

Outflow of Cash Basis Operating Income	
Interest Expense	\$ (1,356)
Other Income	473
Increase Rate Base	(5,395)
Other Minor Items - Investing	1
Net Increase in Long-Term Debt	466
Dividends	(1,254)
Other Minor Items - Financing	(6)
Unexplained difference between dividends per Consolidated Statements of Cash	
Flows (1249) versus dividends per Consolidated Statement of Changes in	
Shareholders' Equity (1254)	5
Unidentified Expenditures	(200)
Uses of Cash Basis Operating Income	\$ (7,266)

X. Attrition

Attrition is a term often used in public utility rate cases to demonstrate earnings deterioration between rate cases. Such positions typically address the need for more cash to support special riders, or to increase depreciation expense or to modernize plant and make needed environmental improvements. Table 7 summarizes the Delmarva-only results for the four years ending 2013.

 $^{^{16}}$ Exelon's SEC 2013 10-k, Consolidated Statements of Cash Flow and Consolidated Statements of Operations and Comprehensive Income

Table 7 – Delmarva Cash Basis v. Accrual Basis 2009-2013¹⁸

	\$(mi	llions)			
	2013	2012	2011	2010	2009
Net Utility Operating Income	\$140	\$119	\$108	\$95	\$79
Accrual Basis Rate of					
Return					
Proprietary Capital	1,029	968	833	821	787
Long-Term Debt	1,072	1,022	870	870	791
Total Capital	2,101	1,989	1,703	1,691	1,578
Rate of Return	6.67%	5.96%	6.32%	5.60%	5.03%
Cash Basis Rate of Return					
Depreciation	85	82	79	75	72
Amortization	0	0	0	0	0
Deferred Taxes and FTC	307	245	441	271	238
Cash Basis Operating Income	533	445	628	441	390
Rate of Return	25.37%	22.38%	36.89%	26.07%	24.72%

Table 7 demonstrates that while rates of return on total capital might appear somewhat low, cash basis returns on total capital were strong. Delmarva may have had a difficult time demonstrating the need for more cash as a result of attrition during those four years if its cash basis returns were considered.

XI. Ratemaking Implications of Excessive Cash Flow

Cash flows from ratepayers into the utility. It seems clear from the Survey that most respondents believe one of the objectives of cash flow is to enable the utility to finance capital additions. Rate base/rate of return ratemaking assumes, on the other hand, that the utility's investors make the investment in plant and equipment, and customers provide a "return on" and "return of capital over its service life.

The U.S. Supreme court recognized that *excessive* cash flow could result in customer-provided capital in the 1930's and earlier. The Court affirmed its opposition to customer-provided capital in a landmark 1934 decision, <u>Lindheimer v. Illinois Bell Telephone Company</u>, as follows:

But <u>if the amounts charged to operating expenses</u> and credited to the account for depreciation reserve <u>are excessive</u>, to that extent subscribers [ratepayers] for the telephone service <u>are required to provide</u>, in effect, <u>capital contributions</u>, not to make good losses incurred by the utility in the service rendered and thus to keep its investment unimpaired, but to <u>secure additional plant and equipment upon which the utility expects a return.</u>

¹⁸ Delmarva's 2009-2013 FERC Form 1s

¹⁹ <u>Lindheimer v. Illinois Bell Telephone Company</u>, 292 U.S. 151, 168-170, 54 S.Ct. 658, 665-666 (1934). (Emphasis added; footnote deleted.)

If a utility funds 100 percent of its capital additions with internally generated cash, it will have collected the cash from its customers to purchase additional plant which increases rate base resulting in a higher return requirement, higher deferred income tax expense, and higher depreciation, resulting in higher charges to ratepayers. Another way of considering the issue is that on the cash basis, ratepayers pay rates which, in effect, expense plant additions as they are incurred, but the accrual basis approach capitalizes the plant additions at the same time they are being expensed on a cash basis.

XII. Free Cash Flow

Free cash flow ("FCF") is a concept typically addressed in the financial community and is determined from bottom line Net Income rather than NUOI. Free cash flow is the cash left over after a utility has paid all of its bills, including interest expense, and 100 percent of its capital additions. The remaining cash is available for dividends, debt reduction and other uses. Free cash flow represents the cash a utility is able to generate after laying out the money required to maintain or expand its asset base. It is extra cash beyond the funds used to finance capital additions. Free cash flow allows a utility to pursue opportunities that enhance shareholder value: acquisitions, greater dividends and debt reduction.

Free Cash Flow according to Wikipedia:

In corporate finance, free cash flow (FCF) is a way of looking at a business's cash flow to see what is available for distribution among all the securities holders of a corporate entity. This may be useful to parties such as equity holders, debt holders, preferred stock holders, convertible security holders, and so on when they want to see how much cash can be extracted from a company without causing issues to its operations.

The free cash flow can be calculated in a number of different ways depending on audience and what accounting information is available. A common definition is to take the earnings before interest and taxes, add any Depreciation & Amortization, and then subtract any changes in working capital and capital expenditure. Depending on the audience, a number of refinements and adjustments may also be made to try to eliminate distortions.²⁰

Free Cash Flow According to Investopedia:

A measure of financial performance calculated as operating cash flow [not NUOI] minus capital expenditures. Free cash flow (FCF) represents the cash that a company is able to generate after laying out the money required to maintain or expand its asset base. Free

²⁰ Wikipedia (Online) as of January 28, 2015http://en.wikipedia.org/wiki/Free_cash_flow

cash flow is important because it allows a company to pursue opportunities that enhance shareholder value. Without cash, it's tough to develop new products, make acquisitions, pay dividends and reduce debt. FCF is calculated as: EBIT (1-Tax Rate) + Depreciation & Amortization - Change in Net Working Capital - Capital Expenditure. It can also be calculated by taking operating cash flow and subtracting capital expenditures.²¹

XIII. Exelon's Free Cash Flow

While Exelon does not file an annual FERC Form 1, it does file annual reports to the SEC and to its shareholders. Table 8 is a summary drawn directly from Exelon Corporation's SEC Form 10Ks for the years 2000 to 2013 inclusive. During that period Exelon Corporation generated \$64.8 billion of net operating cash after income taxes and after interest expense. During the same period, Exelon spent \$42.3 billion on total capital expenditures yielding \$22.5 billion of free cash flow after its customers had provided sufficient cash to pay for one hundred percent of its capital additions during the period.

<u>Table 8 – Exelon's Free Cash Flow 2000-2013²²</u> (\$ millions)

Year	Cash Provided by Operating Activities	Capital Expenditures	Free Cash Flow
2000	\$2,830	\$2,268	\$562
2001	3,558	1,975	1,583
2002	3,981	2,031	1,950
2003	3,384	1,954	1,430
2004	4,398	1,921	2,477
2005	2,147	2,165	(18)
2006	4,835	2,418	2,417
2007	4,496	2,674	1,822
2008	6,551	3,117	3,434
2009	6,094	3,273	2,821
2010	5,244	3,326	1,918
2010	4,853	4,042	811
2012	6,131	5,789	342
	6,343	5,395	948
2013 Total	\$64,845	\$42,348	\$22,497

It is clear from Table 8 that Exelon's net cash flows from operations have increased from \$2.8 billion in 2000 to \$6.3 billion in 2013. Its capital expenditures have also increased from \$2.3

²¹ Investopedia (Online) as of January 28, 2015, http://www.investopedia.com/terms/f/freecashflow.asp, Investopedia defines EBIT as Earnings before Interest &Tax http://www.investopedia.com/terms/e/ebit.asp
²² Exelon's 2000-2013 SEC 10-Ks, Statements of Cash Flows

billion in 2000 to \$5.4 billion in 2013. During that period, Exelon experienced only one year in which its capital expenditures exceeded its operating cash flows. The 2004 capital expenditures exceeded cash flow by \$18 million or 0.8 percent. This negative free cash flow could be a sign that Exelon financed a small portion of its plant infrastructure requirements with traditional financing. Exelon's free cash flow was positive in all other years. In the most recent three years, the free cash flow declined. However, that was not for lack of cash, but rather because capital expenditures increased somewhat faster than cash. Nevertheless, Exelon's free cash flow even in those recent three years totaled \$2.2 billion – over and above its entire capital program.

XIV. Public Utility Fortnightly - The 40 Best Energy Companies

Public Utilities Fortnightly ("PUF") has released an article ranking "The 40 Best Energy Companies" every year for the past decade. PUF averages the most recent four years for each of six financial ratios which are individually ranked for each company. The ratios are profit margin, dividend yield, free cash flow, return on equity, return on assets, and sustainable growth. These ranks are averaged to provide an overall ranking for each company.

PUF ranks the forty companies based on their relative ratios with 1 being the highest rank and 40 being the lowest rank. In general, the average ratio for each company seems predictive of the ultimate final ranking. That is, the company with lowest average ratio also receives the highest ultimate rank, i.e. 1. This makes sense since the lower the individual rankings, the lower the average ranking and the higher the resulting ultimate final ranking.

We used the PUF Top 40 results to estimate the significance of free cash flow. We conducted several analyses: simultaneous equations using individual ratios and ranks, regression and omission analyses. The simultaneous equations provided weighting coefficients, but they did not yield much relevant information. The regression analyses also did not provide any useful information. On the other hand the omission analysis did provide useful information.

The omission analysis was a test to determine the importance of each of the ratios to the average rank by systematically removing each ratio one at a time and then recalculating the average rank. We calculated both the average change in ranks of the companies and the number of companies that changed rank. This analysis shows the relative importance of each of the ratios. Removing the free cash flow ratio resulted in the greatest change both in terms of average rank and the number of companies changed. This analysis reveals that free cash flow has a significant influence on the rankings.

XV. Mergers

All things being equal, the value of a merger to a suitor is the additional cash flow it stands to gain by purchasing the target. This includes the capital additions that are being funded by the target's cash basis income and are therefore throwing-off additional returns on their own. In others words both the anticipated capital additions and actual capital additions have value. Typically the suitor uses its cost of capital to discount the cash value of these items, and compares that number with alternative uses of its cash.

For ratepayers, a merger has no cash value unless it will reduce both rates and the portion of capital additions ratepayers are financing with cash basis income. The value of the reduction can also be discounted, but not at the suitor's cost of capital; the discounted value of a dollar of savings to ratepayers is at the small business and residential ratepayers' discount rate which is much higher than the predator's cost of capital.

XVI. Summary of Conclusions

Based on our research and analyses, we conclude that a public utility's cash flow and free cash flows should be considered in ratemaking and merger proceedings. While many of our survey respondents concluded that cash flow should support plant additions; we conclude that a public utility's cash basis return and rates of return exceed substantially the equivalent accrual basis returns. We conclude that at a minimum, Commissions should consider both accrual basis returns and cash basis returns when confronted with claims for additional cash flow for future additions or as a result of experienced attrition. We conclude that in the financial community, a Public Utility's free cash flow weighs at least as much as other benchmarks such as profit margins, dividend yields, return on equity, return on assets, and sustainable growth forecasts. Just as free cash flow is an important factor in the financial community it is also important to ratepayers. Thus when a Commission considers the value of higher cash basis returns from the customer's perspective, it should rely on the customer's discount rate, which is much higher than the utility's cost of capital.