

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA**

**In the Matter of the Application of Northern)
States Power Company, a Minnesota)
Corporation for Authority to Increase Rates)
for Electric Service in South Dakota)**

Docket No. EL11-019

RATE OF RETURN AND COST OF CAPITAL

**REBUTTAL TESTIMONY AND EXHIBIT OF BASIL L. COPELAND JR.
ON BEHALF OF
THE COMMISSION STAFF**

May 23, 2012

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Basil L. Copeland Jr. and my business address is 14619 Corvallis Road,
3 Maumelle, AR, 72113.

4 **Q. ARE YOU THE SAME BASIL COPELAND WHO EARLIER FILED DIRECT TESTIMONY IN**
5 **THIS PROCEEDING?**

6 A. Yes, I am.

7 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY AT THIS TIME?**

8 A. The purpose of my testimony is to clarify issues raised in the Rebuttal Testimony of James
9 M. Coyne.

10 **Q. MR. COYNE BEGINS HIS ANALYSIS OF YOUR TESTIMONY BY COMPARING YOUR**
11 **RECOMMENDATION TO "PREVAILING LEVELS OF AUTHORIZED ROES." AFTER**
12 **PRESENTING A CHART COMPARING YOUR RECOMMENDED RANGE TO THESE**
13 **"AUTHORIZED ROES," HE RESPONDS TO THE QUESTION "ARE AWARDED ROES**
14 **SIGNIFICANT TO INVESTORS? HOW WOULD YOU RESPOND TO THAT QUESTION?**

15 A. I would say "Of course, they are." But there are two problems with Mr. Coyne's presentation
16 on this.

17 **Q. PLEASE EXPLAIN FURTHER.**

18 A. First, we are not concerned merely with the significance of ROE to investors. We are also
19 concerned with the significance of ROE to consumers, or ratepayers. The Commission's
20 task is to balance the competing interests of investors and ratepayers. Mr. Coyne's analysis
21 is entirely one-sided, and does not consider whether the allowed ROE's that he uses in his
22 presentation strike the right balance here.

23 Second, he opines that "an ROE that is significantly below authorized ROEs in other
24 jurisdictions can be an impediment to the Company's ability to attract capital for investment in
25 South Dakota." Mr. Coyne offers no proof whatsoever for this proposition. Even if we were

1 to accept it as a logical possibility at some point, therein lies the rub. Where is that point, and
2 are we even close to it? I will return to this, after addressing Mr. Coyne's concerns about
3 attrition and regulatory lag.

4 **Q. WHAT ARE THESE CONCERNS?**

5 **A.** Citing recent experience where the Company's actual ROE was below what might be
6 reasonably considered to be a fair return on equity based on the cost of equity capital (which
7 I concluded is 8.5 to 9.5 percent), Mr. Coyne attributes this to "attrition" and "regulatory lag."
8 He defines attrition as a situation where "there are systematic conditions that make it difficult
9 for a regulated utility to earn a its [sic] authorized return." Coyne Rebuttal, Page 7, Lines 14-
10 15. He defines "regulatory lag" as "the delay between the time when a utility incurs costs to
11 serve its customers ... and when it later begins to recover the associated costs through
12 rates." Coyne Rebuttal, Page 7, Lines 23-25. The two concepts are related, of course.
13 However, in Mr. Coyne's presentation, regulatory lag only works to the detriment of investors,
14 seemingly only ever causing attrition, and never causing anything that would redound to the
15 benefit of investors. In truth, however, regulatory lag is *per se* neutral in whether it favors
16 investors or ratepayers. The "*per se*" qualification here is important, however, because
17 ratemaking practices can reflect a preference toward one side or the other in balancing the
18 competing interests of ratepayers and investors. But strictly speaking, investors are just as
19 likely, if not more likely, to benefit from regulatory lag as to suffer from it. This is because
20 generally, the regulated utility, which represents the interests of investors, controls the timing
21 of rate case filings. Where conditions are favorable to the investor, the time between rate
22 cases, which is the ultimate measure of regulatory lag, can lead to returns in excess of the
23 cost of capital. The evidence (market to book ratios well above 1.0) is clear that in recent
24 years such periods have far exceeded periods in which utilities have failed to earn their cost
25 of capital.

1 The point here is that the matter of attrition is far more nuanced than Mr. Coyne
2 makes it appear, and is rarely the result simply of the allowed rate of return. If there are
3 circumstances making it difficult for the Company to earn the ROE I recommend -- 8.5
4 percent to 9.5 percent -- they certainly are not going to be able to earn the ROE that Mr.
5 Coyne recommends. And if the problem is not the allowed rate of return, per se, then simply
6 increasing the ROE is treating the symptom, not the disease. And should the disease, as is
7 often the case, prove temporary, what assurance is there that the Company will lower its
8 rates to prevent earning an excess rate of return? None whatsoever.

9 **Q. MR. COYNE SAYS THAT YOUR RECOMMENDATIONS ARE NOT CONSISTENT WITH**
10 **THE COMPARABILITY AND CAPITAL ATTRACTION STANDARDS ESTABLISHED IN**
11 **HOPE AND BLUEFIELD. IS THIS TRUE?**

12 **A.** No, of course not. It does appear to me that Mr. Coyne may share a popular misconception
13 about the "standards" of "*Hope* and *Bluefield*." The matter here is somewhat muddled by the
14 conflation of *Hope* and *Bluefield*, as if they speak of the same thing. In truth the two
15 decisions were issued under two entirely different regimes of constitutional jurisprudence,
16 despite otherwise similarity of language. *Bluefield* speaks of what a public utility was
17 "entitled" to under a Takings Clause theory of regulation. That theory of regulation, which
18 had been eroded by subsequent decisions, was decisively and finally put to rest in *Hope*,
19 which located the constitutional basis for regulation in the police power, not in the theory of
20 takings.¹ Thus, in *Hope*, after considering how "the comparability and capital attraction
21 standards" (quoting here Mr. Coyne's description) would satisfy the investor interest, the
22 Court said "The conditions under which more or less might be allowed are not important
23 .

¹ See Copeland, Basil L. Jr., and Nixon, Walter W., "Procedural vs. Substantive Economic Due Process for Public Utilities." *Energy Law Journal* 12 No. 1 (Spring 1991): 81-110.

1 here."² That "less" might be allowed, under certain circumstances, followed from the fact that
2 "The ratemaking process under the Act, i.e. the fixing of 'just and reasonable' rates, involves
3 a balancing of the investor and the consumer interests."³ Under the facts of the case before
4 it, the *Hope* Court only had to consider whether the rates in question satisfied the investor
5 interest. And that is all the so-called "comparability and capital attraction standards" of Hope
6 speak to: the investor interest. In a later case the Court said "Regulation may, consistently
7 with the Constitution, limit stringently the return recovered on investment, for investors'
8 interests provide only one of the variables in the constitutional calculus of reasonableness."⁴

9 So, if we are going to opine about what rate of return satisfies some legal standard,
10 let us be sure we state the legal standard correctly. There is no question at all that the rate
11 of return I recommend will satisfy the constitutional standard of *Hope*. If, perhaps, it is at the
12 lower end of what might constitute a reasonable return to the investor, it is at that point the
13 maximum that is appropriate under a fair balancing of investor and consumer interests.
14 Nevertheless, given the evidence I presented in my previously filed testimony, the rate of
15 return I recommended is fair and reasonable to the investor, and I will not repeat it here
16 again, except as necessary to clarify certain points raised in Mr. Coyne's rebuttal testimony.

17 **Q. WHAT POINTS ARE THOSE?**

18 A. I will begin, where Mr. Coyne does, in the matter of applying the constant growth DCF model.
19 The substantive issue here is over the matter of "exclusive reliance" on EPS growth rates.
20 On that much, we agree, as to where the major difference in our approaches lies. Now
21 according to Mr. Coyne, "Exclusive reliance on EPS growth rates is theoretically sound and
22 there are academic findings demonstrating the relationship between stock prices and
23 earnings growth rates." Coyne Rebuttal, Pages 13, Lines 23-24, to Page 14, Line 1. That
24 statement is both a *non sequitur* and is demonstrably incorrect. It is a *non sequitur* in that the

² Federal Power Commission v. Hope Natural Gas Co., 320 U.S. 591 (1944), 603, emphasis supplied.

³ *Loc. cit.*

1 first clause does not follow from the second. Even if "there are academic findings
2 demonstrating the relationship between stock prices and earnings growth rates," it does not
3 follow that "[e]xclusive reliance on EPS growth rates is theoretically sound." I will not repeat
4 here all the theoretical arguments I presented in my direct testimony against "exclusive"
5 reliance upon EPS growth rates (thus demonstrating that the first clause of the statement is
6 incorrect). I will, however, point out that Mr. Coyne did not address them. Rather, he hangs
7 his case on evidence purporting to show that stock prices are more associated with projected
8 growth rates than with historical growth rates. Well, I should hope so (because if they are
9 not, then investors are backward looking, not forward looking). But nobody has raised that
10 issue here. So the study (Vander Weide and Carleton) cited by Mr. Coyne simply isn't on
11 point. It has famously been said that "correlation is not evidence of causation." That is
12 certainly true here. While stock prices may well be (and ought to be) better correlated with
13 projected earnings growth than historical earnings growth, that does not resolve the matter of
14 whether the correlation establishes the structural form of causation implied by the constant
15 growth DCF model. Studies showing a correlation between stock prices and projected
16 earnings are not empirically modeling the correct structural form of the DCF model. Thus,
17 they cannot be used to assert a *per se* preference for EPS projections in a constant growth
18 DCF model, especially where it can be demonstrated (as I did in my direct testimony) that the
19 theoretical assumptions of the constant growth model are not met.

20 **Q. ACCORDING TO MR. COYNE, WHEN YOUR CONSTANT GROWTH RESULT IS**
21 **ESTIMATED USING FORECASTED EARNINGS GROWTH, THE MEAN AND MEDIAN**
22 **DCF RESULTS WERE 10.18 PERCENT AND 10.19 PERCENT, RESPECTIVELY. DO YOU**
23 **DISPUTE THIS?**

24 **A.** No, not as to the math involved. But I do dispute any implication that this is a replication of
25 my methodology. If nothing else, I would just note that in the alleged "REPLICATION OF

⁴ Permian Basin Area Rate Cases, 390 U.S. 747 (1968), 769, emphasis supplied.

1 (BLC-1), SCHEDULE 4 WITH MODIFIED GROWTH RATE ASSUMPTION" (Mr. Coyne's
2 Exhibit____(JMC-1), Schedule 6, Page 1 of 1), that there are four columns of data missing:
3 My Exhibit____(BLC-1), Schedule 4, has 11 columns, denoted "A" through "K." Mr. Coyne's
4 version only has 7 columns, denoted "A" through "G". The missing columns are not
5 incidental to my methodology. They reflect what I contend is theoretically required by the
6 constant growth DCF model. We do not need to be arcane about any of this. Most of the
7 difference between my empirical findings, and Mr. Coyne's (or earlier, Mr. Dane's) are
8 attributable to their exclusive reliance upon forecasted EPS growth rates. They have not
9 denied it (and Mr. Coyne has affirmed it). I think it is wrong, and said why in my direct case.
10 Presenting more and various ways of estimating the cost of equity using only EPS forecasts
11 has not made it right.

12 **Q. YOU USED A METRIC IDENTIFIED AS VALUE LINE'S "% RETAINED TO COMMON**
13 **EQUITY" IN YOUR ANALYSIS, AND MR. COYNE DEMURRED. ARE HIS CONCERNS**
14 **SUBSTANTIVE?**

15 A. No, they are not. Here, he is correct as to the theoretical implications (whereas in the
16 constant growth model he wants to ignore theoretical implications). He is correct that Value
17 Line's metric is only of growth from retained earnings, and ignores growth from externally
18 generated funds. But there is no evidence that this is a significant source of growth, and it
19 isn't a significant reason for the difference between my findings and the findings of Coyne
20 (and Dane). The latter, to the extent it can be meaningfully determined, can be accounted for
21 essentially by two issues: (1) exclusive use of EPS projections, and (2) flotation costs.
22 Everything else is pretty much a distraction (from the significance of those two issues).

23 But as to the negligible or *de minimus* impact of this "issue," I submit the following.
24 First, I have given consideration to this source of growth, implicitly, in the BVPS growth rate,
25 since book value growth will reflect not just growth from retained earnings, but growth from
26 external stock sales, as well. Second, this Value Line metric is an estimate of long term

1 growth more than five years out from the present, and over time, if regulation is effective,
2 growth from external stock sales will be negligible. That is because the magnitude of this
3 growth from externally generated funds is directly proportional to the market to book ratio,
4 and only generates significant growth if market to book ratios are significantly greater than
5 1.0. But if regulation is effective, market to book ratios, over long periods of time, should
6 average out to just a little above 1.0, generating, on average, very little "extra" growth from
7 this factor. It strikes me as rather perverse to build into the allowed rate of return a growth
8 factor that requires a utility to be earning substantially more than the required rate of return!
9 Third, since this is a measure of growth more than five years out, its impact is further
10 diminished by discounting for the time value of money. (Its value, and why I include it, is in
11 providing a longer term perspective over the five year horizons of the other growth rates I
12 employ, since the constant growth rate DCF model is theoretically growth in perpetuity, which
13 is a bit longer than five years.) Finally, this is just one of four metrics used to develop an
14 average, and thus whatever small effect it might have otherwise, that small effect would have
15 to be further diluted by dividing it by four.

16 Understand my point here: I'm not objecting to Mr. Coyne having raised a theoretical
17 issue. After all, my argument against exclusive reliance upon EPS projections is based on
18 theoretical considerations. But in that case, it may account for well over 100 basis points of
19 the difference between our respective recommendations. Here, I would be surprised to run
20 out of fingers counting the number of basis points we might properly attribute to it. It is
21 simply not a substantial issue.

22 **Q. MR. COYNE CONTENDS THAT THERE ARE THREE BASIC "FLAWS" IN YOUR**
23 **DIVIDEND DISCOUNT MODEL (DDM) FORM OF THE DCF APPROACH. IS HE**
24 **CORRECT?**

1 **A.** No, he is not. The first and second seem to reflect a misunderstandings of my application of
2 the methodology. The third involves a critical assumption in which it can be shown that his
3 choice in the matter is quite unreasonable.

4 First, he claims that my application of the DDM "assumes that dividend payments
5 (which represent cash flows to investors) occur at the end of each year." Coyne Rebuttal,
6 Page 19, Lines 2-4. He then contends that this "is inconsistent with Mr. Copeland's
7 application of the Constant Growth DCF model, in which Mr. Copeland effectively increased
8 the current dividend by half of a year's growth rate, in recognition that increases occur
9 throughout the year." Coyne Rebuttal, Page 19, Lines 4-7. This is incorrect. My
10 implementation of the DDM does increase the dividend by half of a year's growth. This is
11 done in Column "BZ" of the spreadsheet model, an example of which is illustrated in the
12 following:

The spreadsheet shows the following data:

	BM	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX	BY	BZ
e														Price:
17	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2030
61	2.366	2.477	2.592	2.712	2.838	2.970	3.108	3.252	3.403	3.560	3.725	3.897	4.077	84.108
36	2.125	2.218	2.316	2.417	2.523	2.633	2.748	2.869	2.994	3.125	3.262	3.404	3.553	75.028
23	1.263	1.304	1.347	1.391	1.436	1.482	1.530	1.580	1.631	1.683	1.737	1.793	1.850	33.881
34	1.177	1.222	1.269	1.318	1.369	1.421	1.476	1.532	1.591	1.652	1.716	1.782	1.850	43.483
62	1.308	1.355	1.404	1.455	1.507	1.561	1.618	1.676	1.737	1.799	1.864	1.931	2.000	52.495
17	2.039	2.167	2.301	2.444	2.594	2.752	2.918	3.094	3.278	3.473	3.678	3.894	4.121	96.457
92	2.380	2.471	2.566	2.665	2.767	2.873	2.984	3.098	3.217	3.341	3.469	3.602	3.740	95.380
31	1.503	1.578	1.657	1.740	1.827	1.918	2.013	2.113	2.218	2.328	2.443	2.563	2.689	54.809
50	2.325	2.403	2.483	2.566	2.652	2.740	2.831	2.925	3.022	3.122	3.226	3.332	3.442	87.993
44	1.504	1.567	1.632	1.700	1.770	1.844	1.921	2.001	2.084	2.171	2.261	2.355	2.453	55.784

13
14 Perhaps Mr. Coyne just overlooked this. Moreover, the dividend stream shown here is not a
15 representation of dividend payments which "occur at the end of each year" (to quote Mr.
16 Coyne). These are a representation of dividends paid during the year. In this, they are

1 precisely analogous to the annual dividends reported by Value Line, which have accrued
2 throughout a year. To use the figure illustrated above, the dividend of "4.077" on the first line
3 for the year 2030 would represent dividends paid throughout the year, thus reflecting the
4 growth implicit in quarterly payouts. The only thing which is presumed to "occur at the end
5 of" a year is the terminal sale in the year 2030. At that point, investors are presumed to be
6 capitalizing expected dividends for the next year, which is why the final year's dividend is
7 adjusted for another half year of growth. The devil is in the details here, and it appears to me
8 that Mr. Coyne may have overlooked them.

9 Mr. Coyne's second putative "flaw" in my implementation of the DDM is that it "allows
10 for no transition in the dividend growth rate assumed in the DDM between the near-term and
11 the long-term measures." Coyne Rebuttal, Page 19, Lines 11-13. Perhaps I bear some
12 responsibility here for poorly stating what I did, but there is a transition in growth between the
13 near-term and long-term measures, as I will demonstrate below. First, though, to explain
14 where the misconception may have arisen, I stated in my testimony:

15 The DDM analysis assumes that earnings grow from 2011 to 2015 at the indicated
16 Zacks consensus EPS growth rate (as noted for each company), and at the long-term
17 growth rate (4.0 percent, the median value of Value Line's "% Retained to Common
18 Equity") thereafter. The period from 2015 to 2030 is a transition period during which
19 the retention ratio changes from the value projected by Value Line in the year 2015 to
20 a common value of 0.39 (the median Value Line estimate for 2015) for all companies
21 in the sample in the year 2029 [sic -- should be 2030]. Copeland Direct , Page 29,
22 Lines 4-10, emphasis on "thereafter" added.
23

24 As worded, the "thereafter" implies a growth rate of 4.0 percent after 2015, when it is in fact
25 the growth rate after 2030. The next sentence, describing the "transition period" is an
26 accurate statement of the methodology, and achieves the transition that Mr. Coyne wishes.
27 For each of the companies in the sample, there are three growth rates: one for 2011 to 2015,
28 one for 2016-2030, and one for 2030 and thereafter. These can be derived from the model
29 details Mr. Coyne was given:

Company	Near-Term	Transition Period		Long-Term	
	Zacks Growth	Dividends 2015	Dividends 2030	Growth Rate	Growth
American Electric Power	4.00%	2.064	4.077	4.64%	4.00%
Cleco Corporation	7.00%	1.868	3.553	4.38%	4.00%
Empire District Elec	6.50%	1.147	1.850	3.24%	4.00%
Great Plains Energy	6.50%	1.051	1.850	3.84%	4.00%
Hawaiian Electric	8.60%	1.175	2.000	3.61%	4.00%
IDACORP, Inc.	4.70%	1.693	4.121	6.11%	4.00%
Pinnacle West	5.30%	2.125	3.740	3.84%	4.00%
Portland General	5.00%	1.297	2.689	4.98%	4.00%
Southern Company	5.10%	2.106	3.442	3.33%	4.00%
Westar Energy	6.10%	1.331	2.453	4.16%	4.00%
	5.88%			4.21%	4.00%

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So while I bear some responsibility for Mr. Coyne's misunderstanding here, the model as implemented does what he thinks it should do: it allows for transition in the dividend growth rate between the near-term and the long-term. Looking at the averages, for the sample as a whole, near term growth was estimated to be 5.88 percent. Long term growth (after 2030) was estimated to be 4.00 percent. And in the interim, transition period, from 2015 to 2030, dividend growth is 4.21 percent.

Mr. Coyne's third criticism is that I assume a long term dividend payout ratio of 61.00 percent, when he thinks that a more appropriate long term dividend payout ratio would be the average since 1990, or "approximately 66.55 percent." Coyne Rebuttal, Page 19, Line 20. The notion that we should use an average that goes back to 1990 is without merit. Payout ratios have been declining, and retention ratios rising, as utilities adapt dividend policies to a more "competitive" environment. We might just as well argue that we should base the expected growth rate on historical growth experience going back to 1990. That would make as much sense. But the real point here is that we should not use any "historical" perspective at all. Indeed, for Mr. Coyne to suddenly introduce historical considerations is completely at odds with the literature that he cites to justify reliance upon financial analysts' forecasts. I

1 happen to concur, here, that we should be looking forward, not backward, and that is what
2 I've done. The payout ratio assumptions built into my DDM analysis are entirely forward
3 looking, as they should be.

4 **.Q. MR. COYNE ARGUES THAT LONG TERM GROWTH IN THE DDM SHOULD BE BASED**
5 **ON SOME ASSUMPTIONS ABOUT THE LONG-TERM GDP GROWTH RATE. DO YOU**
6 **AGREE?**

7 A. No, I do not, at least in the case of utilities. Mr. Coyne's proposal is not unheard of, but it
8 doesn't make any sense when applied to utilities. It is a notion that is sometimes used in
9 implementing DDM for unregulated companies, operating in completely competitive markets,
10 where growth prospects in the near term frequently exceed the long-term GDP growth rate.
11 So, the argument goes, in the long term, such growth cannot be sustained, and in a DDM
12 model, absent better assumptions, the use of the long-term GDP growth rate for the final
13 stage of the analysis is proposed. Now this makes perfectly good sense, in the case of
14 companies investing in new technology, plowing back all (or almost all) of their earnings to
15 generate new growth (and thus paying out no dividend, or a negligible dividend). Obviously,
16 this kind of growth cannot be sustained forever (and "forever" is the ultimate horizon of the
17 DDM model), and at some point such industries mature, growth slows, dividends begin to be
18 paid, and (to repeat myself) in the absence of better assumptions we can at least be sure
19 that long-term growth for such companies (or industries) cannot, in the limit, exceed the long-
20 term rate of growth in GDP.

21 But we have better assumptions, with respect to utilities, and they are not at all
22 comparable to the no/low dividend payout that might justify the use of a long-term GDP
23 growth rate in a DDM analysis. Moreover, to think so leads to an absurd result. Perhaps we
24 should begin with that, and then see where Mr. Coyne's approach goes astray. Mr. Coyne
25 posits a long-term nominal GDP growth rate of 4.93 percent. At the present time, that seems
26 like an heroic assumption, but I will accept it for purposes of the following demonstration. Mr.

1 Coyne presents his own version of a multi-stage DCF analysis, in which this is the growth
2 rate for each of the companies in his utility sample in the final stage: 4.93 percent. This is
3 shown on the various pages of his Exhibit____(JMC-1), Schedule 7, in the columns headed
4 "[31]". But look also at the columns headed "[46]" on the pages of this schedule. There you
5 will see his terminal dividend payout ratio of 66.55 percent. What kind of ROE would it take
6 to sustain a 4.63 percent growth rate, given a dividend payout ratio of 66.55 percent?
7 Ignoring growth from sales of new equity (which will be negligible with effective regulation),
8 the implied ROE is 13.84 percent ($4.63 / (1 - .6655)$).

9 I wonder if Mr. Coyne appreciates how implausible it is to assume a growth rate that
10 requires an ROE of 13.84 percent in perpetuity? If this kind of return had been earned on a
11 dollar invested in 1926, and continuously reinvested until the end of 2010, it would equal a
12 "wealth index" of over \$60,000. To put this into perspective, I have superimposed this kind of
13 return on the actual performance of various financial market indices in the following image
14 [from the 2011 Morningstar Yearbook]:

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2 The kind of return envisaged by Mr. Coyne is indicated by the red line, and would have
3 outstripped even the performance of the most profitable market sector. A much more likely
4 outcome, for utilities, would be something like the range indicated by the two green lines. The
5 upper green line represents the return on "Large Company Stocks," and the lower line is
6 what I think might be more likely for utilities. But I would accept, for this analysis, that these
7 lines represent a range of possible outcomes for utilities. The point is that the kind of internal

1 growth built into Mr. Coyne's DDM analysis is simply outside the realm of experience. Not
2 just outside the realm of experience for utilities, but outside the realm of experience for even
3 the most profitable segment of the market.

4 By way of comparison, the long term growth rate I utilize in the DDM, 4.0 percent,
5 when combined with a payout ratio of 61 percent, implies an ROE of 10.25 percent. While I
6 think that is higher than the cost of equity at the present time, it is a realistic long term
7 estimate, which would generate a wealth index similar to that shown in the figure for "Large
8 Company Stocks." In other words, it is at least a plausible result, and in fact a generous
9 result, since utilities are likely to earn somewhat less, over long periods of time, than the
10 market as a whole. (The outcome of the DDM is lower than this 10.25 percent figure
11 because of the effect of discounting. Dividends are growing more slowly in the near term,
12 and these dividends are given greater weight than the dividends earned further out in time,
13 when the 10.25 percent ROE is in play.)

14 I have not examined other aspects of Mr. Coyne's DDM model in detail. It generates
15 an estimate of 9.98 to 10.08 percent for the cost of equity, depending on the averaging
16 period for dividend yield. This compares to the 8.42 to 8.56 percent result I obtained. I
17 suspect that the difference is largely, if not entirely, attributable to this matter of a reasonable
18 rate of growth for the long-term, and that if Mr. Coyne were to incorporate my assumptions
19 into his model, they would yield results comparable to mine. The Commission can decide
20 here on which model produces the more likely result by simply examining the likelihood of our
21 different assumptions about long term growth. Mr. Coyne assumes long term growth of 4.63
22 percent, based on an unrealistic estimate of GDP. I've assumed long term growth of 4
23 percent, based on Value Line projections. That is where the difference lies, not in other
24 differences in details, which are probably minor, if not negligible. And while that seems like a
25 modest difference -- 4.63 versus 4.0 percent -- in the long term, it is the difference between a
26 realized return of 13.84 percent, and a realized return of 8.6 to 9.6 percent. I submit that the

1 latter is more in line with current investor expectations, and that the former is altogether
2 unrealistic.

3 **Q. MR. COYNE RESPONDS TO YOUR CONTENTION THAT FLOTATION COSTS ARE**
4 **NEGLIGIBLE. ARE MR. COYNE'S OBJECTIONS COGENT?**

5 **A.** No, they are not. He seems to be confusing my approach to this issue with someone else's.
6 He states: "Thus, counter to Mr. Copeland's assertion, the fact that common stock is not
7 issued annually does not negate the need for an annual adjustment to the ROE for flotation
8 costs." Coyne Rebuttal, Page 25, Lines 5-7. I made no such assertion as implied here. The
9 formula I derived for flotation cost is the amount I consider appropriate for "an annual
10 adjustment to the ROE for flotation costs" (to quote Mr. Coyne). The only criticism I made
11 that perhaps could be misconstrued to imply what Mr. Coyne implies is that the method
12 proposed by Mr. Dane (and supported by Mr. Coyne) would be appropriate only if new stock
13 were issued annually. Comparing the two approaches, I said

14 Under certain, but highly unusual and unrealistic assumptions, the two would produce
15 the same general result. But under more plausible and realistic assumptions, the
16 method used by Mr. Dane substantially overstates the adjustment required to recover
17 flotation costs. Copeland Direct, Page 46, Lines 14-17.

18
19 I then proposed a method, for annual cost recovery, that reflects the more plausible and
20 realistic assumptions under consideration. I did not claim to have "negate[d] the need for an
21 annual adjustment," per se. I did go on to conclude that one was not needed in this case, but
22 before we get there, I would point out that the "Q&A" of Mr. Coyne's rebuttal testimony, from
23 Page 25, Line 9, through Page 26, Line 18, are a distraction addressing issues I never
24 raised.

25 The first of these issues is over whether it matters that since 2000, stock has been
26 issued by XEL, instead of NSP. No, that does not matter, and it has nothing to do with the
27 issue here. The next two questions and answers have to do with the impact of raising stock
28 through non-public sources. While I do contend that this will affect the magnitude of the

1 correct adjustment for flotation costs, nothing in this portion of Mr. Coyne's rebuttal testimony
2 really addresses the matter. Mr. Coyne is over-dramatizing the issue. After speculating that
3 "public issuances are likely to be a much more significant source of common equity to
4 support the Company's capital program than non-public issuances," he states:

5 As such, recovery of those costs during a period of elevated capital spending
6 becomes even more important to the Company's financial integrity and its ability to
7 earn its allowed ROE. However, if the Commission were to decide that reflection of
8 non-publicly issued shares in the flotation cost adjustment were appropriate, I
9 strongly disagree that such an adjustment would result in no adjustment at all, as
10 suggested by Mr. Copeland. Coyne Rebuttal, Page 25, Line 24, through Page 26,
11 Line 7 (inclusive of quote in preceding paragraph).
12

13 Again, Mr. Coyne has mischaracterized my testimony. If the Commission wishes to adopt an
14 explicit flotation cost adjustment, it is my testimony that the appropriate amount is 6 basis
15 points. Not "no adjustment at all." If we were to include (improperly) non-public issuances,
16 the adjustment would be about 17 basis points ($0.0331 \times .0528$, based on data presented in
17 my Exhibit___(BLC-1), Schedule 7, Page 1 of 2). By way of comparison, Mr. Dane added
18 about 26 basis points to his cost of equity estimate for flotation costs, which I conceded
19 would be "about right" if all new shares came from public issuances. But since that is not the
20 case (which even Mr. Coyne seems to accept, given his concession to the possibility that the
21 Commission might "decide [against] reflection of non-publicly issued shares in the flotation
22 cost adjustment [is] appropriate," *loc. cit.*), then the appropriate adjustment is much smaller.

23 But it is over-dramatizing the matter to make it one on which the Company's "financial
24 integrity" depends. While the amounts are not negligible (on their own), neither are they
25 significant enough to raise a credible "financial integrity" argument here as the basis for
26 deciding between them. Integrity is a threshold concept: you either have it, or you do not.
27 "Financial" integrity generally refers to the ability to raise capital on reasonable terms. This
28 ability will not be impaired if the Commission adopts my recommendations on the matter.
29 Only if teetering on the edge of a rating downgrade to junk status could a dispute over 6

1 basis points (the correct adjustment, if an explicit adjustment is required) raise the specter of
2 a disastrous impact upon financial integrity from disallowance of such. In any case, I haven't
3 recommended disallowing it per se. I've said that the magnitude is minimal, and can be
4 considered as being offset by the "double leverage" impact of preferred stock.

5 **Q. MR. COYNE ADDRESSES YOUR DOUBLE-LEVERAGE ARGUMENT, CONTENDING**
6 **THAT IT HAS BEEN REJECTED ELSEWHERE, AND VIOLATES THE "STAND-ALONE**
7 **PRINCIPLE." HOW DO YOU RESPOND?**

8 **A.** The concept of "double-leverage" has a long and storied history in ratemaking. Given that, it
9 is not surprising that Mr. Coyne found a couple of authorities for his side of the issue. On the
10 other side, I would just point out that the concept was upheld in 1981 by the Montana
11 Supreme Court, citing for authority my 1979 paper in Public Utilities Fortnightly.⁵ As for the
12 "Stand-Alone Principle," a double-leverage adjustment does not violate that. It is simply a
13 method of reflecting the true cost of the capital employed by a "stand alone" entity.
14 Moreover, the "stand-alone principle" demands it. If the "principle" has any merit, it can only
15 be in the degree to which it "pierces the corporate veil." By this "principle" we seek to identify
16 the true sources of capital, and the costs of that capital, utilized in the provision of utility
17 services. The last thing this "principle" should stand for is the notion of a mythical entity that
18 allows a corporate veil to be cast over cascading degrees of leverage. That was precisely
19 the source of financial abuse that led to the original public utility "holding company" reforms
20 of the 1930's. While some of those reforms have failed to keep pace with evolving financial
21 structures, the double-leverage concept remains potentially useful, and my application of it in
22 this case is appropriate.

⁵ No. 80-99, Supreme Court of the State of Montana, Mountain States Telephone and Telegraph, vs. The Department of Public Service Regulation, Montana Public Service Commission, et al.

1 **Q. MR. COYNE CLAIMS TO MAKE "REASONABLE MODIFICATIONS" TO YOUR CAPM**
2 **ANALYSIS THAT PRODUCES AN ESTIMATED COST OF EQUITY OF 10.76 PERCENT.**
3 **ARE THESE MODIFICATIONS ACTUALLY "REASONABLE?"**

4 **A.** No, they are not. They require unreasonable assumptions about the equity risk premium
5 (ERP). This brings us, of course, to a major focus of my original testimony, delineating
6 current thinking about the ERP. Mr. Coyne tries to dismiss much of this with a broad brush
7 by claiming that I rely upon "a number of dated academic and journal articles that preceded
8 the recent financial crisis and thus are not relevant to current market conditions." Coyne
9 Rebuttal, Page 33, Lines 18-19. This is an unwarranted line of argument for two reasons.
10 First, not all of the evidence I presented is dated prior to "the recent financial crisis," and
11 second, not all academic and financial analysis of the ERP has been rendered "outdated" by
12 this putative "recent financial crisis." On this second point, the "recent financial crisis" (which
13 I qualify as itself "outdated" below), might in fact affect some estimates of the ERP adversely,
14 and even perversely. But not all of them. It will only affect those that rely significantly upon
15 *ex post* (realized) returns to estimate the ERP. And even then, the impact will depend on the
16 length of time covered by the study. Some methods of estimating the ERP from *ex post*
17 returns will only be modestly affected by the recent market "crisis" (because they rely upon
18 decades of data, and the recent market "crisis" only affects a year or two of the data). But
19 this broad swipe of the brush is wholly inapplicable to studies that focus on *ex ante*
20 (anticipated) measures of return. This would include, for instance, the Fama-French study,
21 and perhaps more notably, the Graham-Harvey surveys. I say "notably" in regard to the
22 latter because these have continued to be published since the "crisis" that Mr. Coyne would
23 use here to dismiss much of this.

24 It is instructive, therefore, to take a closer look at the Graham-Harvey surveys, and
25 see how they affect the substance of Mr. Coyne's view of this matter. Since preparing my

1 initial testimony, the surveys have been updated through Q2 of 2012. An extract, salient to
2 this discussion, is presented in the following figure:

3

A. By quarter												
Survey date	Survey for	Number of survey responses	10-year bond yield	Average risk premium	Median risk premium	Disagreement (standard deviation of risk premium estimates)	Average of individual standard deviations	Average of individuals' worst 10% market return scenario	Average of individuals' best 10% market return scenario	Skewness of risk premium estimates	Average of individuals' asymmetry	
30-Nov-07	2008Q1	465	4.04	3.78	4.0	2.73	3.25	2.99	11.60	1.47	-0.32	
7-Mar-08	2008Q2	388	3.61	3.97	4.4	2.97	3.16	3.11	11.50	2.28	-0.29	
13-Jun-08	2008Q3	390	4.15	3.12	2.9	2.72	3.28	2.49	11.20	2.02	-0.41	
5-Sep-08	2008Q4	439	3.69	3.53	3.3	2.59	3.22	2.37	10.90	1.05	-0.41	
28-Nov-08	2009Q1	545	3.10	4.12	3.9	3.10	3.66	1.77	11.47	1.66	-0.36	
26-Feb-09	2009Q2	452	2.75	4.74	4.3	4.11	4.23	1.27	12.40	1.82	-0.47	
29-May-09	2009Q3	440	3.29	3.57	3.7	3.14	3.65	1.41	11.07	1.74	-0.40	
11-Sep-09	2009Q4	546	3.37	3.05	2.6	3.00	3.84	0.60	10.76	1.23	-0.45	
11-Dec-09	2010Q1	460	3.47	3.23	2.5	3.55	3.83	0.67	10.85	2.41	-0.52	
26-Feb-10	2010Q2	485	3.69	2.79	2.3	3.39	3.94	0.34	10.77	1.82	-0.67	
4-Jun-10	2010Q3	449	3.31	3.00	2.7	3.07	3.86	0.36	10.58	2.62	-0.63	
10-Sep-10	2010Q4	461	2.71	2.84	2.3	2.54	4.15	-1.11	9.90	0.72	-0.65	
10-Dec-10	2011Q1	415	3.18	2.89	2.8	2.70	3.85	0.25	10.45	1.50	-0.54	
4-Mar-11	2011Q2	431	3.47	2.98	2.5	2.90	4.13	-0.23	10.72	2.50	-0.70	
3-Jun-11	2011Q3	419	3.01	3.09	3.0	2.90	3.82	0.19	10.30	2.07	-0.67	
9-Sep-11	2011Q4	406	2.17	3.63	2.8	3.12	3.74	0.04	9.97	2.36	-0.53	
16-Dec-11	2012Q1	452	1.94	3.85	3.1	3.04	4.01	0.04	9.97	1.66	-0.34	
1-Mar-12	2012Q2	411	1.97	4.48	4.0	2.97	4.02	0.34	10.98	2.25	-0.59	
Averages for last 18 quarters ->				3.48	3.17							
Average of quarters		347	4.07	3.45	3.31	2.64	3.48	2.03	11.22	1.27	-0.42	
Standard deviation			0.94	0.59	0.64	0.43	0.37	1.29	0.62	0.74	0.13	

4

5 The full table is presented in Exhibit____(BLC-2), Schedule 1. Shown are the survey results
6 for the past 18 quarters, encompassing the time frame of the recent "crisis." Highlighted are
7 the average and median survey results for the ERP: the average of the average ERP, for the
8 past 18 quarters is 3.48 percent. The average of the median ERP for the past 18 quarters is
9 3.17 percent. There is certainly nothing here to justify Mr. Coyne's hand waving dismissal of
10 my ERP estimate of 3.50 percent as being based on data that "preceded the recent financial
11 crisis and thus are not relevant to current market conditions." It remains a credible estimate
12 of the ERP based on recent surveys of CFO's.

1 Mr. Coyne's hand waving is further extended in the remark that "surveys provide
2 policymakers' and executives expectations regarding broad market returns, and provide no
3 information regarding investors' required returns on invested capital. That is a critical
4 distinction and is one that Mr. Copeland ignores." Coyne Rebuttal, Page 36, Lines 1-3. As a
5 dismissal of the Graham-Harvey surveys, it is a thoroughly inapposite remark. The
6 "executives" surveyed are chief financial officers responsible for decisions affecting expected
7 and required returns on invested capital. The Graham-Harvey papers are indexed with
8 keywords that include "cost of capital" and "implied cost of capital." While the results are
9 interpreted as expectations regarding the "market" risk premium, and not necessarily the
10 hurdle rates or expected returns on individual capital investments, they are hardly irrelevant
11 to investor sentiments regarding current market conditions. In fact, they provide a
12 thunderous rebuttal to Mr. Coyne's estimate(s) of the market risk premium. Following the
13 remark just quoted, Mr. Coyne proceeds to describe what he claims is a "more reasonable
14 method to estimate a forward-looking ERP." Without looking in detail at the way he goes
15 about it, let's just cut to the chase and look at his end result: "The implied ERP over the
16 projected 30-year Treasury yield is 8.09 percent," Coyne Rebuttal, Page 35, Lines 16-17. He
17 states further: "or 459 basis points higher than Mr. Copeland's estimate of 3.50 percent," *loc.*
18 *cit.*, Lines 17-18. Or, I might add: 461 basis points higher than the estimate of hundreds (or
19 more) of CFO survey responses for the past 18 quarters. In the end, all the evidence on
20 ERP that I submitted in my original testimony, and have extended here with the update of the
21 Graham-Harvey surveys, are simply inconvenient truths that Mr. Coyne would have the
22 Commission turn a blind eye toward. I trust that it will not, and will give this evidence the
23 weight it deserves (and which I consider substantial).

24 Finally, I would just like to put a different perspective on the recent financial "crisis,"
25 which seems, perhaps to some, to be too good to waste. There is no dispute that there are
26 unique circumstances currently influencing financial markets and investor sentiment and

1 expectations. But hardly a decade goes by but which that isn't true in one way or the other.
2 So let's put a relatively objective and quantitative perspective to the matter. Graham-Harvey
3 observe in their latest report that "the level of the risk premium closely tracks both market
4 volatility (reflected in the VIX index) as well as credit spreads" (with a qualification noted
5 below). There seems to be a consensus emerging as to the utility of the VIX index as a
6 measure of investor "risk sentiment" (as it should, based on theoretical perceptions of the
7 relationship between risk and volatility). Here is a graphic portrayal of the index since the
8 early 1990's:



9
10 While the "crisis" of 2008-09 is obvious, it did not lead to a "step" change in market volatility,
11 and the increase notable in 2008-09 has largely dissipated, with the VIX returning to levels
12 similar to what were experienced around the beginning of the millennium. At present, the VIX
13 index (and note that the scale is logarithmic) has dropped to a third of where it was at the
14 height of the recent "crisis."

15 Graham-Harvey do note "the most recent data show a puzzling divergence between
16 the VIX and our measure of the risk premium. Our analysis suggests that market volatility is
17 inexplicably low." They are calling attention to the uptick of the quarterly result for the latest
18 three quarters: 3.63, 3.85 and 4.48 percent for the average ERP. What they are saying is

1 that these results are higher than they would expect, based on recent levels of market
2 volatility as reflected in the VIX. Be that as it may -- and it may be nothing more than a short
3 term anomaly, made more noticeable being at the end of a data series -- it gives no comfort
4 to Mr. Coyne's take on these matters, because it suggests that based on VIX these estimates
5 of the ERP are too high. But even if we just take them at their face value, we're left with an
6 ERP for the last three quarters of about 4.0 percent, or half what Mr. Coyne claims (8.09
7 percent).

8 **Q. MR. COYNE RESPONDS TO YOUR CALLING ATTENTION TO THE ROE**
9 **EXPECTATIONS IN PENSION PLANS. ARE HIS RESPONSES PERSUASIVE?**

10 **A.** Not really. He seeks to dismiss them with the same kind of arguments he would use to
11 dismiss the Graham-Harvey CFO surveys, adding further that these are "expectations of
12 returns on the broader market, rather than investors' required returns." Coyne Rebuttal,
13 Page 28, Lines 12-13 (emphasis original). This is a curious, if irrelevant, distinction.
14 Certainly, the distinction between "expected" and "required" returns can sometimes be
15 relevant. But where markets are efficient and in equilibrium, at the margin expected and
16 required returns will be the same. And certainly, with respect to "the market as a whole,"
17 where the focus of attention is on the "expected risk premium," there is no salient difference
18 between "expected" and "required," and the ERP is the required market premium for risk. As
19 for pension return expectations, I cited them only to put the Company's ROE requests in
20 perspective. In estimating the "cost of equity," because it is a market based measure, where
21 the market is in equilibrium, there is no significant difference between "expected" and
22 "required."

23 As for the expected returns on pension investments, Mr. Coyne claims:

24 Moreover, the distinction between expected and required returns is reflected in the
25 fact that many investors are currently avoiding stock investments because the returns
26 they *expect* from stocks are less than the returns they *require*. Coyne Rebuttal, Page
27 39, Line 22, to Page 40, Line 2, emphasis original.
28

1 But we are not discussing here investments being "avoided." We are discussing investments
2 actually undertaken, and part of the portfolio of pension plans. Now if the pension fund
3 managers are prudent, and any of those investments are expected to earn less than the
4 return that is required, those investments will be sold, and the funds reinvested in
5 investments where the expected return is equal or exceeds the required return. So unless
6 Mr. Coyne is asserting wholesale imprudence on the part of pension fund managers, we may
7 conclude that, on the whole, these "expected" returns are at least equal to the required
8 return.

9 This is, I submit, the answer to Mr. Coyne's quotation of an Arkansas Public Service
10 Commission (APSC) decision, stating:

11 There are two major problems with this sort of analysis: (1) it is unclear how long the
12 time horizon is; and (2) these returns are expected, not required. It is well-
13 established that expected returns may be less than, equal to, or greater than required
14 returns. For that reason, expected returns cannot be used directly as a proxy for
15 required returns, which is the information sought in a general rate case.
16

17 The APSC's reasoning here is defective, unless the APSC is also presuming that pension
18 fund managers are imprudent and have significant funds invested where the expected return
19 is less than the required return. At any time, of course, they may conclude that this is the
20 case with respect to specific investments, and adjust portfolios accordingly. But in no way is
21 this a particularly informed basis for rejecting the probative value of these assessments
22 outright.

23 **Q. MR. COYNE DISCOUNTS THE RELEVANCE OF THESE PENSION FUND PROJECTIONS**
24 **BECAUSE OF CONCERNS OVER "LARGE-CAP" VERSUS "MID-CAP" OR "SMALL-**
25 **CAP" COMPANY SIZE. ARE THESE CONCERNS VALID?**

26 **A.** No. There is an issue here that I've glossed over before now, but which may be dealt with
27 here summarily. Mr. Coyne is postulating a mythical entity when he says we should look
28 either to NSP or South Dakota operations to determine the appropriate basis for comparison.

1 We are not here estimating a cost of equity specifically for NSP or South Dakota, except as
2 that cost of equity is derived, in the marketplace, by the cost of equity for Xcel. When NSP
3 merged to create Xcel, I'm certain that any approval sought from the SDPUC was based on
4 expectations that there were benefits from such a merger. Well, one of the benefits of NSP
5 being part of a larger market capitalization is the access to cheaper equity. It would be
6 wholly improper to ignore this, and impose a higher ROE on NSP's ratepayers that does not
7 reflect the cost of equity capital actually invested in the business. While there are some
8 legitimate reasons to approach capital structure and cost of debt from an NSP-centric point of
9 view, those reasons do not hold for equity capital, and it is ultimately the cost of equity capital
10 for Xcel (or XEL) that is our concern here. Bear in mind here that we are, ultimately,
11 estimating the cost of equity from a sample of market traded companies. I accepted, for this
12 purpose, the sample proposed by Mr. Dane (and now adopted by Mr. Coyne). While the
13 sample reflects a variety of small, mid, and large cap companies, the average capitalization
14 of the 10 companies in the sample is \$7.6 billion, and the capitalization of XEL is \$13 billion,
15 figures which indicate that we are effectively estimating the cost of equity for a "large cap"
16 investment. This is, of course, as it should be, so that NSP's South Dakota ratepayers can
17 benefit from XEL's access to lower cost equity capital. Mr. Coyne's attempt to transform the
18 issue into one where we are estimating the cost of equity for a small cap or mid cap
19 investment is not only conceptually invalid, but empirically as well.

20 **Q. MR. COYNE CITES A PAPER BY ASWATH DAMODARAN (AN AUTHOR YOU CITED IN**
21 **YOUR ORIGINAL TESTIMONY) CONCLUDING THAT FROM OCTOBER 2011 THROUGH**
22 **APRIL 1, 2012, THE ERP HAS BEEN 6.94 PERCENT, OR 344 BASIS POINTS HIGHER**
23 **THAN THE 3.50 PERCENT YOU USE. DO YOU HAVE ANY COMMENTS?**

24 **A.** Professor Damodaran's research is interesting and worth consideration. I would classify it as
25 supporting an ERP at the upper end of the range of current thinking about the ERP, and so

1 while interesting, it is not necessarily representative. Moreover, looking at his research more
2 closely, it is not as supportive to Mr. Coyne's position, and NSP's requested ROE, as it might
3 seem at first glance. The high "implied" ERP findings of Dr. Damodaran are anomalous, and
4 he recognizes this. The following graphic extracts an interesting discussion from the March
5 2012 edition of his ERP research paper⁶:

$$\text{Implied ERP} = 3.26\% + 0.1125 (\text{T.Bond Rate}) \quad R^2=8.30\%$$

(8.71) (2.11)

This regression does provide support for the view that equity risk premiums should not be constant but should be linked to the level of interest rates. In fact, the regression can be used to estimate an equity risk premium, conditional on current interest rates. On March 14, 2012, for instance, when the 10-year treasury bond rate was 2.1%, the implied equity risk premium would have been computed as follows:

$$\text{Implied ERP} = 3.26\% + 0.1125 (2.10\%) = 3.50\%$$

This would have been below the observed implied equity risk premium of about 6.01% and the average implied equity risk premium of 3.99% between 1960 and 2011. Put differently, given the low level of risk free rates in 2012 and the historical relationship between equity risk premiums and risk free rates, we would have expected the equity risk premium to be a much lower number (3.50%) than the actual number (6.01%).

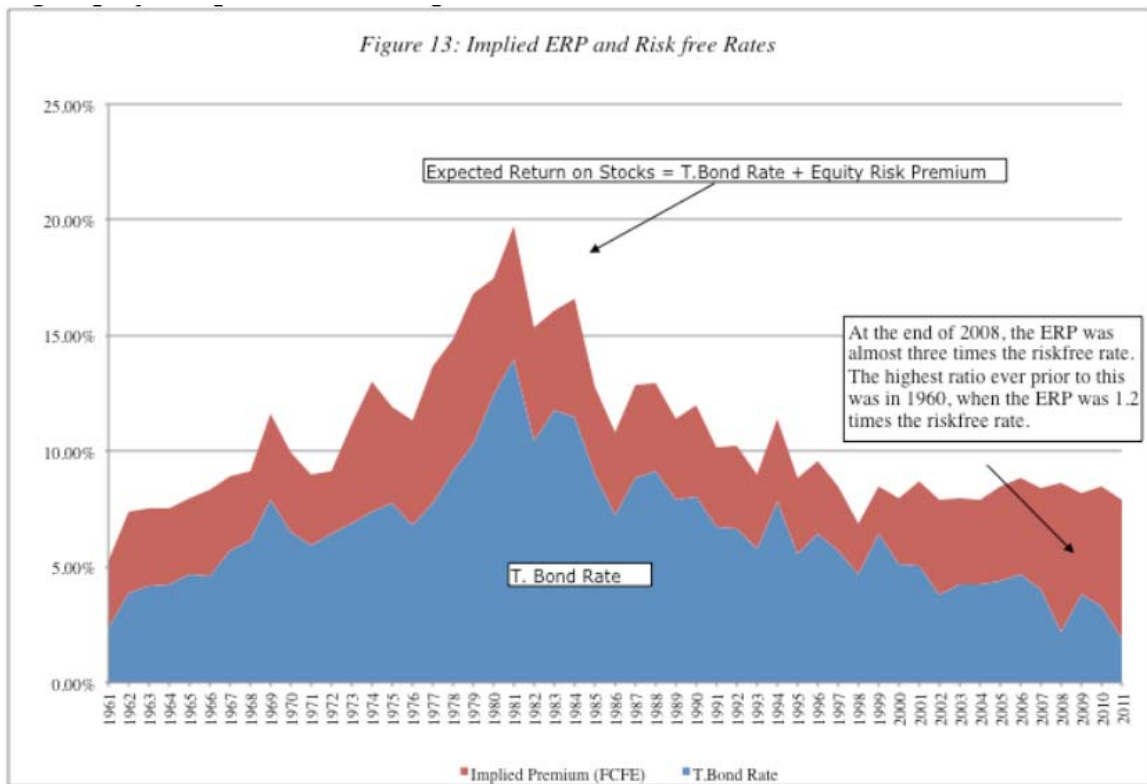
6
7 Professor Damodaran is saying that while his "implied" ERP was 6.01 percent, that based on
8 the regression, "we would have expected the equity risk premium to be a much lower number
9 (3.50%)," which happens to be exactly what I used! Serendipity being what it is, you cannot
10 make up coincidences of this kind.

11 In any case, I wish to call particular attention to the regression equation used to
12 derive this estimate of 3.50 percent. It directly contradicts the regression equations
13 presented by Messrs. Dane and Coyne purporting to show an inverse relationship between
14 interest rates and risk premia. I critiqued the structural basis for Mr. Dane's regression in my
15 original testimony, and nothing Mr. Coyne has said adequately addresses that critique. I
16 proffered an alternative regression, based on the CFO surveys, which showed no significant

⁶ Aswath Damodaran, "Equity Risk Premiums (ERP): Determinants, Estimation and Implications -- The 2012

1 correlation. I have not analyzed the basis for Professor Damodaran's regression in detail, but
2 presume that my finding of no correlation, and his finding of a positive correlation, is an
3 artifact of how the risk premium is estimated. That would be true, as well, of the regressions
4 of Messrs. Dane and Coyne, that the finding of an inverse correlation is an artifact of the
5 (bad, flawed) method used to estimate the risk premium used in those regressions.
6 Whatever merit might attach to Professor Damodaran's approach, it is notable that it posits a
7 relationship contradictory to that of Dane and Coyne, and one that would lead us to expect
8 an ERP of 3.50 percent in March 2012.

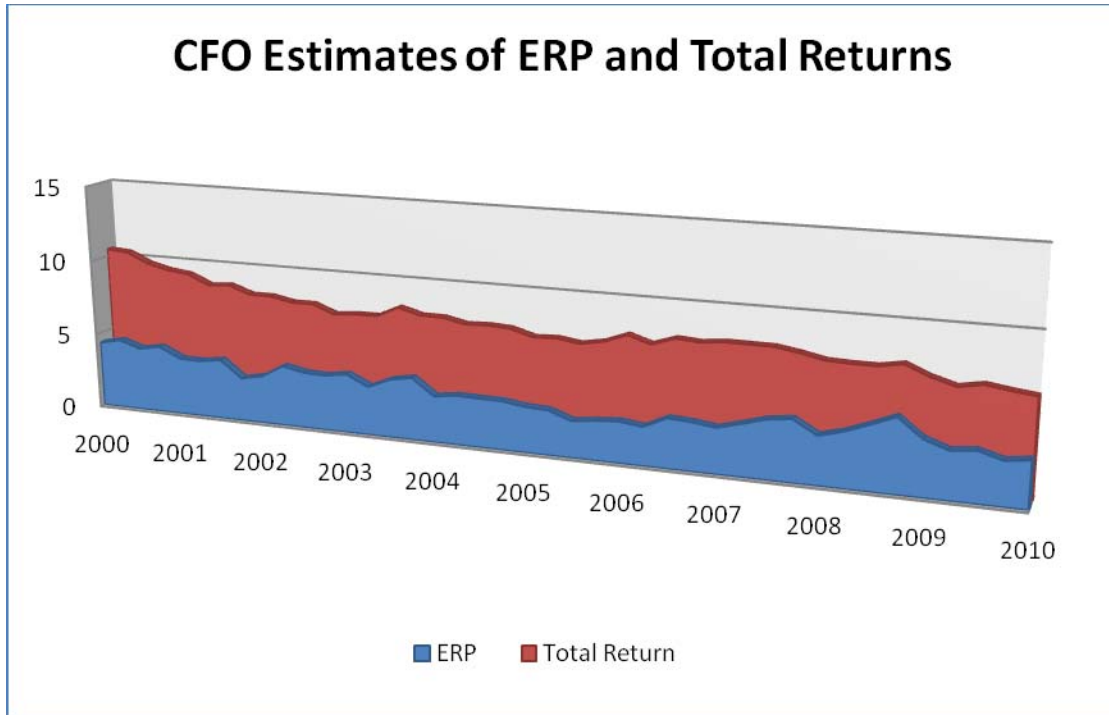
9 I would close this discussion of the relevance of Professor Damodaran's research to
10 the matter under consideration by calling attention to this figure from his research paper⁷:



11

Edition." Updated: March 2012. Excerpt is from Page 79.
<http://people.stern.nyu.edu/adamodar/pdfiles/papers/ERP2012.pdf>, accessed May 18, 2012.
⁷ *Loc. cit.*, Page 78.

1 By summing the "T. Bond Rate" and the "Equity Risk Premium," the figure charts an estimate
2 of the "Expected Return on Stocks." This is somewhat like the figure I presented, based on
3 the CFO surveys, in my original testimony, and show here again to facilitate comparison:



4
5
6 Despite the different methods of construction, both charts agree that for the past decade, or
7 longer, total expected returns have been below 10 percent, i.e. in the "single digit" range.
8 There is no support, here, from Professor Damodaran's research, for NSP's requested ROE.
9 It buttresses my contention that an ROE of 8.5 to 9.5 percent would be quite fair, and
10 reasonable, under current market conditions.

11 **Q. MR. COYNE ADDRESSES TWO ISSUES YOU RAISED WITH RESPECT TO CAPITAL**
12 **STRUCTURE AND COST OF DEBT. PLEASE RESPOND.**

13 **A.** The first issue I raised concerns the use of a thirteen month average, versus year end
14 balances. He seems to accept my contention that there is a "general 'rule'" that end of test
15 year balances are the most accurate estimate of the capital structure, but contends that "it is

1 not a more accurate estimate of the cost incurred to finance the Company's rate base, upon
2 which the Company will earn its return." Coyne Rebuttal, Page 42, Line 24, to Page 43, Line
3 2. It seems we have different perceptions of what is "more accurate." Mr. Coyne (and NSP)
4 are focusing on the capital invested during the period of time that the rate base
5 encompasses. But there is nothing "special" about this time period as it relates to cost of
6 capital. Cost of capital is specifically forward looking. Using an end of test year balance
7 sheet for capital structure and cost of capital is just a type of "known and measurable"
8 change.

9 Consider the following hypothetical, to illustrate the difference here. I will proffer two
10 versions of the hypothetical, to illustrate the intrinsic fairness of my position on the matter.
11 Suppose, midway during the test year, the utility is able to refinance all of its debt, and cut its
12 annual cost of debt in half. Under NSP's position, only half a year's savings will be reflected
13 in its debt costs. During the first full year of new rates developed this way, NSP will earn (as
14 economists would say, *ceteris paribus*, or "all other things equal") more than required to pay
15 the interest on its debt, and thus earn more than the required return on equity. On the other
16 hand, suppose that midway during the test year, the utility refinances all of its debt, and at a
17 significantly higher rate than the previous debt. In this instance, under NSP's approach,
18 there will a shortfall in the following year, and NSP will fail to earn its required return on
19 equity. Because such changes are "known and measurable," they should be reflected in the
20 development of debt cost and capital structure.

21 Beyond the known and measurable justification, it would suffice to simply note that
22 NSP's approach is based on the fallacy that capital can be attributed to specific physical
23 investments. In other words, NSP's approach ignores the principle of fungibility. New
24 financial capital invested during the year is not attributable to any specific physical
25 investments made during the year (which is the heart of NSP's position). Especially in the
26 case of debt, where (as has been the case in recent years) older debt is retired and replaced

1 with cheaper debt, that new debt is not specifically attributable to any physical property.

2 Under this notion of fungibility, the best estimate of the capital available for the business in
3 the future is the year end level, not a 13 month average.

4 Mr. Coyne also challenges my contention that there is an element of double counting
5 in NSP's approach to determining the cost of debt. Allow me to begin by clarifying the basis
6 for what might seem to be some confusion: Mr. Coyne states:

7 Specifically, Mr. Copeland's testimony first states, "[t]he company is being allowed to
8 include the full amount of the face value in its capital structure," but later states,
9 "NSP's approach...is to include only the 'capital employed' amount in the debt ratio."
10 Coyne Rebuttal, Page 43, Lines 14-18.

11
12 The first statement is based on what I would recommend. It is also, in my experience, the
13 normal practice of ratemaking and rate of return. Normally, capital structure is based on the
14 amounts reflected in public financial statements (and comparable to what was presented in
15 NSP's Statement G), and that is the approach I recommended. However, based on Mr.
16 Coyne's Schedule 11, I agree that NSP's approach to calculating the embedded cost of debt,
17 while unusual in my experience, is not inconsistent. Nevertheless, I think it should be applied
18 to a capital structure that is based upon capitalization at the end of the test year. Schedules
19 2 and 3 of Exhibit____(BLC-2) reflect an updated capital structure and overall rate of return
20 consistent with this. The resulting overall rate of return is 7.63 percent.

21 **Q. DOES THIS CONCLUDE YOUR TESTIMONY AT THIS TIME?**

22 **A.** Yes, it does.