Equities

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Back to the Future

Running reregulation scenarios

Industry Overview

- **European governments are increasingly looking at utilities** — as a source to raise money against pressing budget deficits but also as means to help consumers' purchasing power by limiting increases in bills.
- **Climate change targets in particular though** — mean that returns cannot be cut too severely or else the necessary investments will be jeopardized.
- **Although the EU energy directives** — call for liberalized markets, the extent of government intervention increasingly looks like indirect re-regulation.
- **Following 33% underperformance** — vs. the market since January 2009, we investigate if the worst-case scenario of EU-wide indirect regulation is factored in.
- **In our tangential note today** — **"**Have governments made the European Utility sector uninvestable" we argue that the end game for the sector might be a possible renationalization of investment decisions and returns (not ownership).
- **Our analysis shows that** — in a scenario where utilities where only allowed to earn their cost-of-capital in their European operations, the sector would have 19.1% EPS downside. That downside would magnify to 24.5%, if we were to include the potential of an EU-wide non-passthrough tax, like the Italian Robin Hood tax, in our scenario. Considering that the sector is overgeared by ~€30b, we estimate the EPS decline could be even more severe.
- **We estimate that at current share price levels** — the sector is pricing in a ~100bps improvement in achieved returns (i.e. the opposite of re-regulation) and is trading on 9.7x "reregulated" earnings (11.2x if we also normalize for gearing) vs. the broader market on 9x FY11E. We therefore would view the market-relative performance of the sector as still skewed on the downside.

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What if governments set sector's earnings

The deregulation of the European Utilities sector was launched in 1999. Since then the landscape of the European utility sector has changed dramatically with the creation of large cross-border electricity and gas vertically integrated companies. The profitability of the sector has also changed with net income for European utilities up more than 60% in the last decade, albeit a material portion of that growth has come for diversification outside Europe.

Since the deregulation of the European Utilities sector, average household electricity prices (excluding VAT and other taxes) have increase on average by 23% as shown in Figure 1.

Figure 1. Household electricity prices excl. VAT in €/MWh.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2010 vs. 1999
EU-15	105	103	103	103	104	103	104	109	121	125	133	129	23.3%
Belgium	118	117	118	114	112	115	112	112	123	150	143	145	22.6%
Czech Republic	48	48	54	64	65	66	73	83	90	106	110	111	129.0%
Denmark	68	72	78	87	95	92	93	100	117	120	124	117	71.5%
Germany	128	119	122	126	127	126	133	137	143	130	140	138	8.1%
Ireland	80	80	80	88	101	106	120	129	147	156	179	159	99.9%
Greece	62	56	56	58	61	62	64	64	66	96	106	98	56.8%
Spain	93	90	86	86	87	89	90	94	100	112	129	142	52.5%
France	95	93	91	92	89	91	91	91	92	91	91	92	-2.8%
Italy	157	150	157	139	145	143	144	155	166	166	172	171	9.2%
Luxembourg	108	106	112	115	119	122	129	139	151	144	162	143	33.2%
Netherlands	88	94	98	92	97	103	110	121	140	127	144	127	43.2%
Austria	98	95	95	93	93	98	96	89	105	127	138	143	45.8%
Portugal	120	119	120	122	126	128	131	134	142	107	126	109	-9.0%
Finland	66	65	64	70	74	81	79	81	88	92	97	100	52.1%
Sweden	65	64	63	70	84	90	85	88	109	109	104	120	83.0%
United Kingdom	97	106	100	103	96	84	84	97	125	139	140	132	36.7%

Source: Eurostat, Citi Investment Research and Analysis

However, this includes France, which in maintaining a regulated tariff system and a fixed low-cost generation base (nuclear) has kept tariffs largely flat for consumers. For most other countries that tariff increases are in the ~50% mark. Subsidies for renewable generation have added anywhere from 5% to 20% on customer bills.

Over the same period (1999-today), household consumption has grown by 35% meaning that utility bills are taking up a bigger proportion of household expenditure than a decade ago.

The contribution of utilities to the overall economy has also grown over this period, with utilities net income as a proportion of the SXXP companies having doubled since 2000.

This has resulted to a situation that as of today, utilities profits have outpaced that of the broader economy and customer bills have risen much faster than inflation or GDP.

Within governments' matrix of the following goals:

1) improve government budgets and debts
2) maintain popularity with voters
3) achieve infrastructure investments and climate change goals

it is little wonder that the solution increasingly appears to be to tap into the profit base of utilities.

In this report we examine a theoretical scenario in which European governments decide to curb utility profitability in generation and supply to returns just in-line with cost of capital. For the purposes of this exercise we will assume that the existing regulation in T&D across European countries stays as is, although there is clearly risks of tougher regulation on that front too. We will similarly assume that the profitability of any non European (EU) assets also remains unchanged although admittedly budget tightening is a global phenomenon and not just concentrated in Europe.

Step 1: Setting the returns for generation

The risk free rate of the European utilities generation and supply assets weighted by the geographies they are present in stands as of today at 3.9%. In our analysis we will use however 4.5% which is the weighted average by geography of the Citi economists' 10-year yield forecasts.

On the risk-free rate we then add a debt premium of 100bps for thermal generation plants, 150bps for hydro and renewables and 300bps for nuclear generation plants.

Figure 2. Assumptions on allowed cost-of-debt for European power generation

	Thermal	Nuclear	Renewables / hydro
Risk free rate	4.50%	4.50%	4.50%
Debt premium	1.00%	3.00%	1.50%
Cost f debt	5.50%	7.50%	6.00%

Source: Citi Investment Research and Analysis

We set the equity beta at 0.7x for renewables, 0.75x for coal/gas/oil plants and 0.65x for nuclear plants. A December 2010 report by Europe Economics commissioned by OFGEM showed that the 2-year, 5-year and 10-year equity beta for energy utilities was in the range of 0.55-0.75x. Our assumptions are at the higher end of that range, as with the risk-free-rate, providing for higher than otherwise allowed returns for utilities.

We assume that a solid A-rating would still be a requirement by utilities managements for easy and continuous access to the debt markets. As a result we would consider a 50-60% gearing ratio as sustainable; at the low end of the spectrum for capital intensive nuclear plants and the higher end for renewables, in-line with practices seen in liberalized markets.

Figure 3. Assumption on allowed cost of equity for European power generation

	Thermal	Nuclear	Renewables / hydro
Equity beta	75.00%	65.00%	70.00%
Market risk premium	4.50%	6.00%	5.50%
Gearing	55.00%	50.00%	60.00%
Cost of equity	11.08%	11.82%	11.75%

Source: Citi Investment Research and Analysis

We use a 29% tax-rate, which is the weighted average of countries on which the companies discussed in this report are based.

Figure 4. Calculated assumed allowed cost of capital for European power generation

	Thermal	Nuclear	Renewables / hydro
nominal pre-tax WACC	8.01%	9.66%	8.30%

Source: Citi Investment Research and Analysis

Step 2: Setting the regulated base for generation – revalued capital employed

The base on which the allowed return will be used should reflect the economic value of the assets. This is the same principle that France is using to determine the ARENH price on the country's nuclear plants. To estimate the economic value we will calculate the construction cost of the assets in today's money and then adjust that value for the age of the assets.

To calculate the construction cost we use data from recent project awards as well as information from the EIA and IHS CERA.

Figure 5. Estimate of economic value (age adjusted) of European power generation

	coal	gas	nuclear	lignite	wind	solar	Hydro	Other	Total
Capacity in MW (own %)	71,633	79,137	32,030	16,749	28,596	425	66,222	28,618	323,410
Economic value (€ m)	47,644	37,399	45,850	8,795	49,705	1,390	72,844	22,541	286,167

Source: Company reports and Citi Investment Research and Analysis

Step 3: Setting the profitability for the supply business

We've looked at pure supply margins (excl. distribution) in Continental Europe, the UK and the US. We also noted the French public service contract which allows a 3% margin on marketing of gas and EON's statement that under normalized conditions its Ruhrgas reselling business should generate €0.5-1/MWh margin. As gas prices tend to be more volatile than power prices, we allow for a higher margin in gas marketing activities (€1.5/MWh) vs. electricity marketing activities (€1.0/MWh).

Step 4: Deriving the allowed EBIT for the sector

Based on the estimates above we derive an allowed regulated EBIT for the European generation and supply activities of the sector of €28.2b, which is about 6% below the current achieved level of €29.9b. The EBIT calculated this way relates to ~€309b of revalued capital employed.

We assume the other activities (already regulated infrastructure in Europe and non-European and / or non-Energy assets) continue to earn their existing level of returns. That's an additional €23.8b of EBIT on €178b of historic cost capital employed.

As a result we estimate that under a scenario where European governments / regulators would allow utilities to earn only a cost-of-capital return on their local assets (European utilities defined on the perimeter of the companies in Figure 6) then the sector would generate €52b of EBIT on its current scope of operations against €53.8b it currently generates, i.e. a 3.3% cut.

Figure 6. Companies on which our analysis applies

GDFSuez
Public Power Corp
CEZ
EON
RWE
ENEL
IBERDROLA
GAS NATURAL
EDP
EDPR
SCOTTISH AND SOUTHERN
NATIONAL GRID
DRAX
CENTRICA
FORTUM
ENEL GREEN POWER
VERBUND

Source: Citi Investment Research and Analysis

Step 5: Estimating the earnings impact

The only remaining factor to determine the net earnings capacity of the sector is capital structure.

For that case we will assume that governments and regulators won't impose on utilities a certain gearing level, even if there is one explicitly assumed when setting the returns. This would be consistent with T&D regulation where capital structure is left to the discretion of utilities management.

We will however assume that although gearing benefits should accrue to shareholders, cost of financing benefits should accrue to consumers and therefore will set cost of debt to be equal to the levels assumed by the allowed WACC (6%).

We therefore estimate that the sector's total net income (regulated and not, European and not) would stand at €24.2b against current achieved levels of €29.82b, i.e. a 19% EPS downgrade for the sector.

Exceptions and sensitivities

Robin Hood Tax Scenarios

The one type of regulation that our analysis does not apply to would be cases similar to the "Robin Hood Tax" introduced in Italy where the tax rate for utilities is differentiated from the general corporate tax rate, something that would normally be reflected in the allowed WACC / ROCE calculation, but the higher tax rate is not allowed to be passed on to the consumer.

If we were to assume a similar (10.5%) Robin Hood tax across all European energy assets then the sector's net earnings would decline to €22.5b, i.e. a 24.5% cut vs current achieved levels.

Gearing scenarios

On our analysis we have assumed a ca. 60% gearing for the sector, consistent with an A credit rating, which is what most utilities target. However, the utilities sector is currently overgeared vs. that threshold, evidenced by the disposal programs that a lot of companies have underway.

Based on the re-regulation hypothesis we have presented thus far, the sector is ~€30b overgeared (~€50b if the unsecurised portion of the Spanish tariff deficit is included). Eliminating that excess debt load at current share prices, would effectively imply ca. 13% further EPS dilution to the sector vs. what we have already estimated.

Sensitivities to our assumptions

Here we show the sensitivity of our results (sector net income) to some of the major assumptions of our analysis.

50bps increase in risk free rate ➔ 1.3% increase in net income

50bps increase in debt premium ➔0.8% decrease in net income

50bps increase in equity risk premium ➔ 1.4% increase in net income

100bps increase in corporate tax rate ➔ 0.9% decrease in net income

500bps increase in non-pass through tax rate (eg. Robin Hood tax) ➔2.9% decrease in net income

€0.5 / MWh increase in supply margins ➔3.6% increase in net income

Impact on valuation

For the purposes of this analysis we will treat historic cost capital employed for non-European and non-generation/supply assets the same as our calculated (Step 2) revalued capital employed for European generation and supply assets. Summing the two together should give us a measure of the sector's invested capital.

Historically regulated utilities trade on a 10% premium to a 10% discount to their regulatory asset base and we will assume the same here, where in the place of regulatory asset base we will use the group's calculated invested capital.

Figure 7. Valuation upside / downside from current levels under a re-regulation scenario assuming no degearing

	equity upside / (downside)	CY PE
110% EV / IC	-0.5%	9.6x
105% EV / IC	-11.0%	8.6x
100% EV / IC	-21.4%	7.6x
95% EV / IC	-31.9%	6.6x
90% EV / IC	-42.3%	5.6x

Source: Citi Investment Research and Analysis

As Figure 7 shows within the normal range of 10% premium or discount to invested capital, under all scenarios the utilities sector would offer some valuation downside. Indeed it is pricing in an 11% premium to IC at current levels, which would mean a meaningful (~100bps) improvement in returns, which, as we have analysed in our September 5th note European Utilities - Value Destruction Set to Continue, we view as optimistic.

Figure 8. Companies mentioned in this report

RIC	Company	Current Price	Target Price	Rating
ANA.MC	Acciona	59.04	76.0	2M
CEZPsp.PR	CEZ	746.00	1040.0	1M
CNA.L	Centrica PLC	2.86	3.3	2M
DEHr.AT	Public Power Corp.	5.58	25.0	1H
DRX.L	Drax Group Plc	5.22	3.5	3H
EDF.PA	Electricite de France	18.84	31.0	2H
EDP.LS	Energias de Portugal	2.21	2.9	2H
EDPR.LS	EDP Renovaveis	4.08	5.3	1M
EGPW.MI	Enel Green Power	1.58	1.8	3M
ELE.MC	Endesa SA	16.30	27.0	1M
ENAE.WA	Enea	15.70	22.7	2L
ENAG.MC	Enagas SA	12.82	17.0	2M
ENEI.MI	ENEL SpA	2.93	3.5	2M
EONGn.DE	E.ON AG	12.81	16.0	2H
FUM1V.HE	Fortum Oyj	17.57	20.5	2H
GAM.MC	Gamesa	3.34	5.0	3M
GAS.MC	Gas Natural SDG SA	11.14	15.0	1M
GSZ.PA	GDF Suez	19.29	29.0	1M
IBE.MC	Iberdrola SA	4.39	6.1	2M
IPR.L	International Power	3.19	3.8	1M
NG.L	National Grid PLC	6.12	5.3	2M
PGEP.WA	Polska Grupa Energetyczna	18.69	22.8	2L
PNN.L	Pennon Group PLC	6.56	6.4	1L
REE.MC	Red Electrica de Espana SA	31.36	50.0	1M
RENE.LS	REN	2.07	2.3	3M
RWEG.DE	RWE AG	21.73	25.0	3H
SEVI.PA	Suez Environnement	10.49	17.0	1L
SRG.MI	Snam Rete Gas SpA	3.21	4.3	1L
SSE.L	Scottish & Southern Energy PLC	12.41	13.5	2L
SVT.L	Severn Trent PLC	14.25	16.5	1L
TRN.MI	TERNA SpA	2.45	3.1	1L
UU.L	United Utilities PLC	5.84	6.7	1M
VERB.VI	Verbund AG	21.21	30.0	2H
VIE.PA	Veolia Environnement	9.75	26.0	1M

Source: Citi Investment Research and Analysis

Appendix A-1

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