

## Cost of capital in the financial turmoil: how should utilities deal with it?



As a direct result of the current credit crisis, the Weighted Average Cost of Capital (WACC) for utilities is becoming increasingly difficult to assess. The high level of uncertainty in projections as well as the escalation of cost in debt financing has provided stern challenges to the traditional approach in determining WACC. Our experiences have shown that a multi-scenario analysis tailored to specific needs is the best tool to tackle the issues utilities are facing today.

Weighted Average Cost of Capital (WACC) is commonly adopted to discount future cash flows from specific investment opportunities, with the scope of evaluating their financial attractiveness to the business.

Utilities, as any other type of company, need to know their cost of capital for an array of reasons: to support investment decisions in their businesses, to assess the opportunities of producing versus purchasing energy, to articulate sound negotiation strategies with authorities in case they are operating under a regulated regime.


The WACC of a business tends to vary over time since most of the inputs necessary to perform its calculation, for example the risk-free rate, company beta and cost of debt, follow financial market fluctuations. However, what is noteworthy is the magnitude of changes triggered by the current credit crisis.

Focusing in particular on utilities, we have identified three factors:

- High level of uncertainty in the estimation of forward looking financial figures
- Increasing cost of accessing to debt financing, including that of stable and reputable institutions
- Unusual effects difficult to factorize with the traditional approach

*Overall market uncertainty affects the accuracy of WACC calculation*

**WACC calculation to capture the future reality...**



$$WACC_{pre-tax} = \frac{E}{D+E} \times r_E / (1-T) + \frac{D}{D+E} \times r_D$$

$D/D+E$  : percentage of debt in total capital  
 $E/D+E$  : percentage of equity in total capital  
 $r_E$  : cost of equity  
 $r_D$  : cost of debt  
 $T$  : effective tax rate

**...is more uncertain than ever**

- High level of uncertainty in the estimation of forward looking figures:
  - Risk free rate
  - Corporate bonds credit spread
  - Gearing ratio
  - ...
- Increasing cost of debt also in case of stable and reputable institutions:
  - Credit shortage
  - Lack of "cheap" financing sources
  - ...
- Unusual effects difficult to factorize with the traditional approach:
  - Increasing risk aversion
  - More extreme positions taken by different stakeholders
  - ...

Next, we set out the evidence and suggest, based on our understanding, the most suitable way to deal with these new issues.

## Main evidences from our experience

WACC measures a company's cost of equity and debt financing on the basis of four key components:

- Gearing ratio – a measure of financial leverage of a firm by comparing owner funds and creditor funds
- Cost of equity – representing the compensation that the market demands in exchange for owning the asset and bearing the risk of ownership
- Cost of debt – the effective rate that a company is currently paying on its debt
- Effective tax rate – the actual amount of tax the firm pays divided by tax base

A sound estimation of forward looking figures is particularly important when dealing with long-term decisions such as regulatory concessions which typically last for 10 years and above. However our experience indicates that it is becoming increasingly difficult to produce firm estimates due to the effects of the crisis. For example, gearing ratio, a measure of financial leverage, needs to reflect the optimal capital structure to enter the necessary investments and enable business operations in the future. At present, credit shortage is affecting the ability of businesses to access new funds at reasonable costs, leaving firms with no alternatives than cutting down investments. This has a direct impact on gearing ratio, which can no longer be calculated as a figure optimized according to business rationales only. Now the growing constraints on the financing side have to be taken into account. In addition, the risk free rate, the starting point of both cost of equity and cost of debt calculations, becomes more and more difficult to capture: does a long term historical average or a more recent and shorter outlook better represent the reality and its future evolution?

Despite an impact on cost of equity, mainly driven by uncertainty in the risk free rate, it is on the cost of debt side that we have encountered the highest impact from the credit crunch. The spread over risk free assets seems often sky-rocketing for stable utilities as well: even big financial institutions are becoming less willing and capable to provide financing. Thus, is it better to go for an optimistic figure of a relatively low rate that is in line with historical borrowing conditions, or should we opt for a conservative projection that reflects the increasing difficulty to access financing sources for the length of the period under consideration?

Furthermore other factors are contributing to the increasing overall level of uncertainty, bringing about additional destabilizing effects:

- Privately held utilities, not backed up by the government, can experience mounting degree of vigilance from their own shareholders, especially in emerging markets. As consequence, investors often become less willing to take any additional form of risk and are quicker to react to modifications of their operating conditions, such as to license terms
- Lending conditions during licence renewal periods experience an even higher volatility, with interest rates offered by banks growing significantly before the signature of the agreement while prices are expected to drop immediately afterwards
- Widely accepted concepts, such as the higher risk involved in generation compared to transmission and distribution businesses in electricity, are often questioned by the utilities themselves. In fact besides the volatility of energy demand, which negatively affects power production and its capital intensive business, also pricing and level of service, dimensions usually regulated by government authorities, can threaten utilities' performance from the distribution side

*Each component now implies a series of issues to address*

Gearing Ratio	<ul style="list-style-type: none"> <li>• Forward looking always to be preferred over historical but...</li> <li>• ...how to take into account of credit shortage impact on investment capacity?</li> </ul>
Cost of Equity	<ul style="list-style-type: none"> <li>• Long time historical average or more recent and shorter outlook to better represent the reality and its future evolution for the Risk Free Rate?</li> <li>• How to take into account additional premium required to compensate extra risks that otherwise might be understated?</li> </ul>
Cost of Debt	<ul style="list-style-type: none"> <li>• Discontinuity between historical long-term bank borrowing rates and loans currently under negotiations: how to better capture the future?</li> <li>• Also for solid and high reputable utilities banks are often less willing of providing financing: how to convince them?</li> </ul>
Additional factors	<ul style="list-style-type: none"> <li>• Private utilities' investors might feel overexposed to volatility with respect to big state owned (and backed) government companies</li> <li>• Extreme volatility of lending rates over concession renewal</li> <li>• Implicit business risks more carefully evaluated by shareholders</li> </ul>

### A multi-scenario analysis tailored to specific needs

Given the level of uncertainty, we suggest businesses should consider multiple scenarios in calculating the WACC. Scenarios should provide 3 different degrees of outcome, optimistic/base/pessimistic cases and, ideally, an understanding of their likeliness.

Drivers to be taken into account and expected returns could vary substantially in different situations such as standalone investment projects, additional premium required by foreign investors to commit money in emerging markets or overall scenario for a licence negotiation with the authorities.

The scenarios should be tailored to capture underlying business issues and concerns of key stakeholders (e.g. shareholders, regulator):

- Developing a careful sensitivity on currency exchange risks and country sovereign spreads would be crucial to support arguments towards foreign investors in emerging markets
- Elaborating on intrinsic company and overall business risk in the long term, and capturing them in forward looking figures, could provide a solid background to interact with local regulatory authorities
- Building sound cases on the historical solidity of the utility and its future ability to repay the debt amidst the financial turmoil might help anticipate potential objections from financial institutions

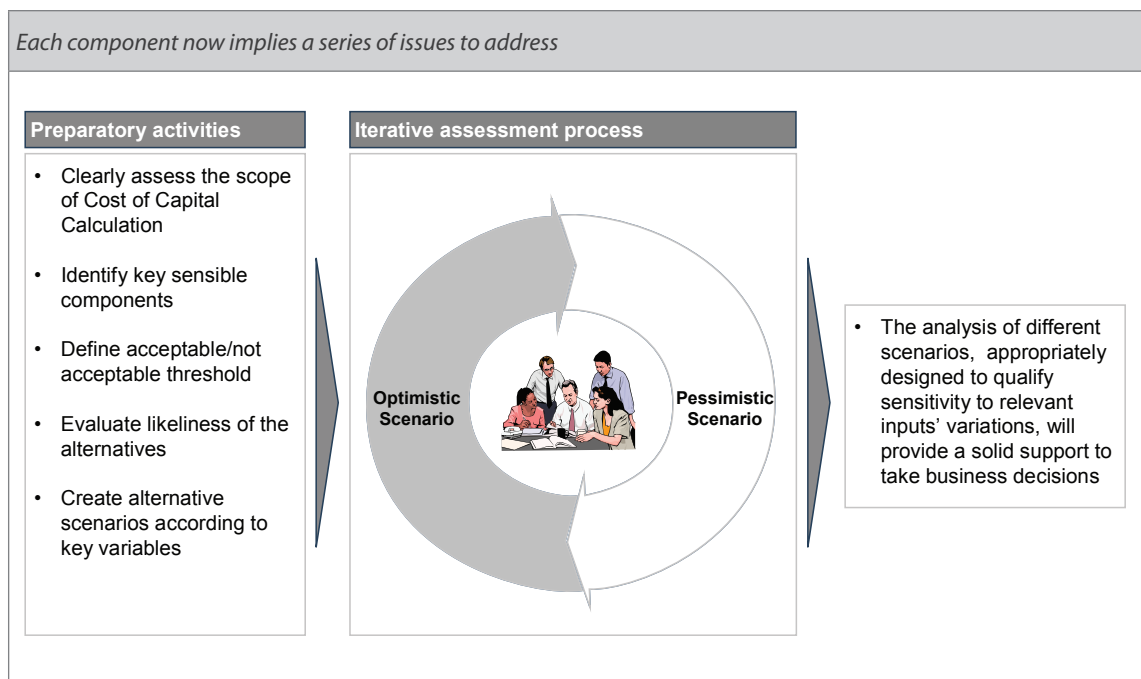
Evolution of currency exchange and country risks from a foreign investor perspective could be analyzed in different ways. One is estimating a premium starting from the risk free rates spread between two countries using bonds with the same maturity and currency denomination. Articulating two possible scenarios, one with and one without this additional premium, can clarify the impact, providing investors with a proxy to estimate the additional risk they would incur and, consequently, the additional reward they should ask for. On the other hand if the risk is more currency than country-related, an understanding of market expectations on exchange rates (i.e. via future rates) can again provide at least a basic understanding of extreme situations to decide if they need to be compensated with an additional premium, with proper currency hedging instruments or with a mix of them.

Intrinsic company and overall business risk in the long term, most of all in a context of great uncertainty, could be studied through a sensitivity analysis on betas. Considering for example that, mainly for non-listed companies, finding an asset beta which exactly reflects the business mix of the company under observation is extremely difficult, it can be useful to take as a reference betas of similar companies with focus on different steps of the value

chain, e.g. power generation vs. transmission & distribution, to define a range and understand how extreme situations affect the outcome. A similar sensitivity could be performed analyzing volatility of state-owned and of privately owned utilities vs. the volatility of the market. This would again enable capturing different levels of risk exposure to take into account in the overall case.

Finally, estimating cost of debt in the long term is a task that neither has a simple solution nor a unique answer. Two extreme scenario could be built using on one side the historical, usually low, cost of debt incurred by the company in the past and on the other a “pessimistic” scenario characterized by a much higher cost of debt “as of today” due to the credit shortage context. Within these boundaries a third scenario aiming at capturing the recovery from the financial turmoil can be designed as a weighted composition of the two extremes.

It should be very clear that all these hypotheses are designed as a tool to obtain an understanding on the effects of variations imposed to key parameters, for making more conscious decisions on how to handle such “risks”. Certainly, having previously assessed the “What if” scenarios can provide an advantage in the outcome of negotiation.



Under the current business environment, we believe that creating alternative scenarios and assessing their likeliness from a critical standpoint is one of the most powerful tool to support different stakeholders in taking business decision.

### About Value Partners

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With 15 offices across Europe, Asia, South America and MENA, Value Partners expertise spans corporate strategy and financial business planning, cost transformation & organizational development, commercial planning, technology decisions, and change management. Its 3,000 professionals, from 25 nations, combine methodological approach and analytical frameworks with hands-on attitude and practical industry experience developed in executive capacity within their sectors of focus: media & telecoms, luxury goods, financial services, energy, manufacturing and hi-tech.

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