CEMS Work Project:

Forecast of Risk-Return profile in a changing environment

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MSc program number: 14000561

23/05/2014

Index

List of Abbreviations

AI	Attractiveness Factor
CTG	China Three Gorges
EBITDA	Earnings Before Interests, Depreciations and Amortizations
EDP	Energias de Portugal
EIA	Energy International Agency
EV	Enterprise Value
GDP	Gross Domestic Product
GDPcap	GDP per capita
IMF	International Monetary Fund
LDA	Linear Discriminant Analysis
PPA	Power Purchase Agreement
R^2	Coefficient of Determination

BRIEF CONTEXT OF THE BUSINESS PROJECT

Introduction

In the early age of discovery, Portugal was forced by domestic conditions to seek new land to expand to. At that time, sailors were characterized as madman due to its pursue after an only imagined land, where richness would await them. In fact, they could not predict how attractive one new territory was over another. They simply relied on trial and error, expanding to wherever they managed to, working either successfully or disastrous.

Today, there is a Portuguese company *Energias de Portugal* (*EDP*) seeking internationalization due to current market conditions. In contrast to the past, *EDP* has the methods to attempt a valuation of expansion projects, contributing to the success of its strategy.

The company

EDP is a major player in the Portuguese utility market in the production, distribution and commercialization of electricity[1] and owns a subsidiary *EDP Renováveis* that is on of the largest renewable energy operator worldwide (EDP, 2013) present in Spain, Brazil and the US among others[2].

Market overview and current client situation

The European utility sector is currently suffering from a lack of growth opportunities, based on market saturation and a crisis-driven depressed demand. *EDP* is quite exposed to saturated markets, especially to Portugal and Spain that face exceptional depressed consumption levels[3]. Regulatory risk has been increasing and more unexpected: in Spain *EDP* was recently sharply affected by sudden regulatory changes (FitchRatings)[4]. In Portugal the electricity market liberalization has been compromising future cash flow stability: starting from 2017 no more long-term contracts (PPA's[5]) will be in place. The sovereign crisis not only affected demand, it also dragged corporate bond prices down (Financial Times, 2012); *EDP* was no exception and suffered punishing credit rating downgrades[6], together with higher financing costs. In order to cope with the recent risks arising, a deleveraging process is undergoing with

1 See Appendix 1
2 See Appendix 2
3 See Appendix 3a and 3b
4 Sudden and unexpected regulatory change compromised EDP's expected
5 Power Purchase Agreement's are contracts between a generator and a buyer of electricity defining all commercial terms
6 See Appendix 4

the goal to return to investment grade rating. The recent purchase of the government stake of the company by *China Three Gorges* (*CTG*) has relieved somehow the financing struggle, while distancing state direct intervention.

In contrast to Europe, expansion opportunities exist in emerging countries offering increasing electricity demand[1], low regulatory risk and long-term contracts. Furthermore, there is a clear trend on environmental consciousness and consequently political support for renewables is increasing (European Comission, 2014).

Concluding, *EDP's* recent outperformance against industry peers will only persist if the company manages to continue on expanding successfully (EDP, 2014).

The Business Project challenge

Our challenge was to develop a methodology and tool to support *EDP's* decision makers in identifying prospective expansion markets by evaluating them in terms of return and riskiness. The project included both a quantitative and a qualitative analysis[2], guaranteeing that *EDP's* particularities and preferences were taken into account. Furthermore, the sensitivity of shareholders was considered into the analysis of results.

Summary of conclusions

From the quantitative analysis, out of 180 analyzed countries 81 were recommended. A deeper look was taken into a list of 13 countries that *EDP* is considering, and our model supported only six of those. We have used the opportunity to suggest to *EDP's* a range of interesting new countries that seemed to fit the clients' preferences[3] such as Costa Rica and Panama. Recommended countries were further assessed according to the corresponding risk-adjusted scores. Systematic and total risks[4] were taken into account, should the client consider its investment decision on the respective diversified- or strategic shareholders.

Four recommended countries were analyzed qualitatively in detail: Chile, Colombia, Mexico and Peru.

The results of both quantitative and qualitative model only indicate where it is more likely to be more successful in the future, yet they are not conclusive. Further due diligences of country specific factors is mandatory.

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[1] *See Appendix 5*
[2] *See Appendix 6*
[3] *See Appendix 7*
[4] *See Appendix 8*

FURTHER DEVELOPMENT OF A SPECIFIC TOPIC

The modeling of an *Attractive Indicator* and its main limitations

The topic I wish to further develop is not a specific and restrictive analysis as recommended, but rather a base element of our approach. Our quantitative model is based on the assumptions compiling the *Attractiveness Indicator (AI)*, an indicator conceived by us to analyze the potential of an investment in the past. Every prediction of future country scores and consequently every resulting hypothesis from the model are fundamentally dependent on one indicator created by us. I pretend to defy the construction of our *AI* by suggesting its main constraints. Moreover, I pretend to test whether it is an actual good predictor for the potential of an investment in a country. If this relationship is proven, the value of our model will drastically increase.

The model determines where *EDP* can make more money by looking to our predicted country scores in 2015, which are calculated through three main quantitative procedures: a *Scoring Model*, a *Linear Discriminant Analysis* (*LDA)* and a *Factor Model*.

The scores are obtained in the *Scoring Model*. Two steps compose the *Scoring Model*. A first *Monte Carlo Simulation* predicts 99 times each future factor value by combining a random term with past factor values and -volatility and upholding past correlations between factors. A second step where forecasted factor values are multiplied by coefficients derived from a *Discriminant Analysis,* resulting into 99 predictions for each country. The average prediction is taken as the country score for results' analysis. This country score represents the attractiveness of a country in 2015§. As limitation the *Scoring Model* does not provide a final result on whether a country is attractive, but only a proposition. Additionally, certain countries' estimates of factors face high standard errors and should be improved in terms robustness. Moreover, we have decided to use factor forecasts given by *IMF* or *WorldBank* when available without upholding correlations between these and the ones that we run the *Monte Carlo Simulation*. Finally, only intuitive interpretation may be applied to the "sign" of the coefficients.

The *LDA* (Li, 2014) extracts rules from past observations on how factors taken from the *Factor Model* impact the *AI* of a country. The independent variables are linear, but the dependent variable is not. According to a user-chosen threshold, the dependent variable is considered a "good" or a "bad" depending on whether the underlying *AI* is above or below the defined threshold. A cut-off determining the dependent variable is calculated by maximizing

the separability between "good" and "bad" past observations. The coefficients itself have however no meaningful interpretation.

Finally, the goal of the *Factor Model* allows to capture the main factors contributing to the risk-return profile of a particular investment. The *AI* is created at this stage as a proxy for the *Present Value of Future Net Taxes Operational Profit* of a country backed up with financial valuation modeling theory (Tim Koller). It is based on the following assumption that an ideal country to invest in should offer convergence potential and a significant size worth the risk and effort of expanding to unknown territory. The convergence potential is given by a high trend on *Cash Flow* growth and low fragmentation of the market. Further additional positive conditions include higher electricity price, a lower discount rate, a lower tax rate and a higher differential between inflation and foreign exchange rate return. The indicator adjusts for the competitive environment by taking into account the number of biggest players competing in the market sharing 75 per cent of market share plus one additional new player. The formula of the *AI*[1] consists on a convergence term of ten years and a terminal value afterwards:

$$AI_{i,t} = \underbrace{\left[\frac{Q_{i,t} * P_{i,t}/T_{i,t}}{WACC_{i,t} - g_{i,t}} * \left[1 - \left(\frac{1 + g_i, t}{1 + WACC_{i,t}}\right)^{10}\right]\right.}_{\text{Annuity}} + \underbrace{\left.\frac{Q_{i,t} * P_{i,t}/T_{i,t}}{WACC_{i,t} - g^*} * \left(\frac{1 + g_{i,t}}{1 + WACC_{i,t}}\right)^{10}\right]}_{\text{Terminal Value}} * \frac{1}{Competitors_i}$$

Figure 1: Attractiveness Indicator

One main arguable assumption is the *Discount Rate* used. First, we have assumed equal *Cost of Debt* for any project, relying on the hypothesis that the size of a project does not differ between countries, and that the debt financing is done at a conglomerate level and therefore equal for any different project which is supported by Shapiro (Shapiro, 2014, pp. 476-508). This assumption enables to proxy *WACC*[2] through *Cost of Equity*. Secondly, according to Shapiro (Shapiro, 2014, pp. 214-255), international companies should adjust country specific risk only at a *Cash Flow* level without penalizing *Cost of Equity*. Nevertheless, adjusting *Cash Flows* for risks would only be feasible in theory through a probability analysis, in practice it is in fact rarely used due to its complexity and imprecision. Therefore, we have decided to adjust *Cost of Equity* to country risk (as international companies use to do) in accordance to Damodaran's paper (Damodaran) by transforming *Country Risk Premium*,

[1] *See Appendix 9 for further details on AI formula*
[2] *Weighted Average Cost of Capital (WACC) is composed by cost of debt, cost of equity and the corresponding weights of debt and equity in the capital structure*

which is typically an *Equity Premium,* into a *Treasury Bond Premium* factorized by a given multiplier (Damodaran).

Additional flaws remain on the proxy used for electricity profit margin: *GDPcap.* Since it is not feasible to gather electricity prices and costs for 180 countries, we were forced to use a questionable alternative indicator that expresses the link between income and price. On one hand consumers are willing to pay more for a good or service, the higher their income is. On the other hand, electricity prices tend to be higher in poorer countries, where the underdevelopment of complementary conditions such as deficient grids or higher electricity losses drive up costs and consequently prices. Looking to the *Doing Business* indicator *Cost of Getting Electricity* the complementary effect on the cost side can be supported. The indicator is calculated by the sum of all electricity use related costs (i.e. costs related to the grid) up to the consumption of electricity, excluding generation costs, as a percentage of *Income per capita*. The indicator is clearly higher for poorer regions such as the Sub-Saharan Africa or South Asia[1]. If considering that electricity companies are able to capture profit margin from higher complementary efficiency, *GDPcap* could well proxy a positive relationship between profit margin and complementary development.

Furthermore, the modeled convergence period and the corresponding terminal value suggest that countries will grow at recent pace of convergence for ten years and will than reach a steady state with a growth rate of two per cent (which may be redefined by the user). Modeling the future is completely arbitrary and may be far from reality.

As a side note the settings of the model enable the user to contemplate the indicator based on the total electricity market, or to restrict it to a specific technology. This ability may reformulate conclusions regarding the point of view of a renewables company.

Summing up, our quantitative approach relies on how our modeled country score relates to the attractiveness of a country, a relationship that has been proven by us before on past observable data[2] (using in sample testing). However, in order to ensure that the underlying assumptions of our *AI* are appropriate we need to test the indicator against an actual market indicator for country attractiveness.

[1] *See table on http://www.doingbusiness.org/data/exploretopics/getting-electricity*
[2] *See Appendix 10*

What I would have done differently

If I had more time, I believe testing the *Attractiveness Indicator* would add the most value. Guaranteeing the relevancy of our indicator would certainly accomplish a much more reliable and powerful model, and consequently be significantly more meaningful to *EDP*.

First it is important to understand what the *AI* should be tested against. The testing variable should be a comparable indicator to the one we have built and consequently it should define the attractiveness of a country for a new player in terms of the *Present Value of Net Taxes Operational Profit*. Gathering an indicator for *Net Taxes Operational Profit* would impose limited difficulties. Nevertheless, in order to be comparable to the *AI* that indicator should not only discriminate for the perspective of a new player, but it should additionally provide the *Present Value* of *Cash Flows* and not a single period observation. These conditions enunciate a demanding analysis.

In order to proceed, I suggest the following assumption that *Investment* and *Financing Cash Flows* do not depend on the market attractiveness but rather on the financial particularities of each company (Shapiro, 2014, pp. 476-508). This step enables the illustration of *Operational Profit* by using profitability metrics such as *Net Income* or *Free Cash Flow* to proxy attractiveness. Taking that the sample contains a large number of companies, the financial characteristics of each of them should net out.

Finally, to capture the *Net Present Value*, one may look to market indicators that are linked to the *Discounted Cash Flow (DCF)*. If considering a *DCF* model a good model for the valuation of an enterprise, and that investors rely on such models to estimate the value of a company, *Enterprise Value (EV)* is a good indicator for *Present Value of Cash Flows* (Tim Koller R. D.), and consequently of our modeled indicator for attractiveness. *EV* is given by the sum of *Market Capitalization, Interest Bearing Debt* and *Preferred Stock*, minus *Excess Cash*. One should bear in mind the weaknesses of this approach, since we are comparing a value that is market driven with another that is model based. Investors will in fact adjust their positions according to their valuation predictions; nevertheless the component *Market Capitalization* depends on the price of the stock that often accommodates short-term expectations. Furthermore, investors usually do not rely on one only valuation model. *DCF* tends to overestimate a company's value[1] while varying significantly depending on personal arbitrary assumptions composing the modeled forecasts. Other models such as *Market*

[1] *See Appendix 11*

Comparables are regularly taken into account jointly in an investment decision. Further steps taken ahead from this Work Project should include an analysis with supplementary valuation techniques that are rather more market based.

Taking *EV* as the right variable to test *AI* on, there are still certain details to adjust to. Our modeled indicator gives the total market potential divided by the number of biggest players in the market. Bearing this in mind and reminding that *EV* is a firm specific variable, one requires summing *EVs* by companies in a given country obtaining a *Present Value of Market*[1] *Size*. In this step I have taken from *Bloomberg* every company in the utilities industry within the electricity segment with a higher *Market Capitalization* than $50 million. I was left with 648 securities with observations for the corresponding *EV* from 29/12/2000 to 28/12/2012, a 13-year period for each security, which assembles a sample of 8424. From this sample, I have computed the *Present Value of Market Size*, resulting in a sample of 884. Every country's *Present Value of Market Size* was adjusted for the number of largest players in the market with 75 per cent of market share taken from *Enipedia*[2] source. The sample was corrected for missing values or errors, leaving 286 observations from 22 countries for analysis.

The sample for our modeled *AI* was taken accordingly: 286 observations composed by 22 countries and based on the same 13-year period.

Both variables may suffer a trend depending on whether the local market faces long-term growth. Therefore non-stationarity may be in question. Yet while the sample gathers observations from different countries together, the trend is country specific. More importantly, the goal of this Work Project is to test whether there is a relationship between the *AI* and one market measure of attractiveness. Therefore, it is not important that the given relationship is driven by a trend; it is only relevant to prove its existence, considering the trend fundamental is identic.

The *Coefficient of Determination* (R^2) taken from a *Simple Linear Regression* determines how much of dependent variable's volatility depend on the volatility of the *AI*. The R^2 equals 0,26247 [3], which may be considered small but nonetheless there is an existing and relevant variability of market attractiveness driven by *AI*. By testing the significance of *AI* on the

[1] *Present Value of Market Size is an indicator composed by me that should represent the sum of all companies' cash flows in an economy*
2 Enipedia is a data gathering website focused on Energy and Industry topics
[3] *Appendix 12*

potential *EV*[1], it results in a p-value close to zero, proof that *AI* is significant on predicting the potential of a new player in the market.

By proving this relationship, the conclusions of our quantitative analysis are now much more powerful and reliable, since they actually rely on a significant real indicator for market attractiveness.

To guarantee a more reliable testing of *AI,* one should in the future improve the process in several dimensions. First, the sample of companies used contains companies in three layers of the electricity market: generation, distribution and commercialization. Nevertheless, these three segments are significantly different and the corresponding attractiveness depends on different factors. Since our *AI* is rather indicated for the generation of electricity, the corresponding adjustment should be completed. Secondly, it seems reasonable that several companies included have international exposure and therefore the calculated country *Market Size* does not only contain domestic potential, but it may as well be biased towards international *Cash Flows* of domestic companies. In a future analysis this bias should be corrected by weighting each company's *EV* by *EBITDA* percent exposure to domestic market. Nonetheless, international exposure should on average be disperse and therefore have little effect on the computed *Present Value of Market Size.* One could additionally control the quantitative model to focus on renewable electricity by changing the settings, and consequently test the new *AI* to the potential *EV,* which would now address only renewable companies. This Work Project intended to incorporate these results, but it proved rather difficult to gather a significant sample of representative companies in the renewable segment.

Finally, one could as well address the weaknesses of the constructed *AI* stated above and consider how each assumption could be improved. For instance, focusing the analysis on countries from which electricity prices are available would permit the *AI* to proxy the actual *Net Present Value of Cash Flows* more precisely.

Conclusion

Looking to the results obtained in the Business Project and the Work Project together, *EDP* has been provided with a reliable framework to anticipate more accurately its expansion decisions.

Given that the courageous sailors had been supplied with an equivalent framework, most likely the Golden Age of one nation would have been even brighter…

[1] *Appendix 13*

REFLECTION ON LEARNING

Masters content applied

I am a student of the masters in Economics and International Management. Within these programs I was exposed to several leadership and international challenges, and chose several courses in management, economics and finance.

In a first dimension, I feel I was prepared to work with an international team, even though I was the only native Portuguese. The masters exposed me to several similar environments before, which prepared me to excel with people from different backgrounds and cultures.

In a second dimension, I was able to apply several concepts and knowledge learned in the master courses. The management courses of Global Strategy enabled me to properly analyze how a company should internationalize depending on its capabilities. The econometrics background contributed drastically to the project. We were able to do properly compute *Monte Carlo Simulations* and run statistical testing of variables by assuring normality and guaranteeing stationarity when variables required to be transformed. The courses in finance such as corporate finance, risk- and asset management and accounting were very helpful in this project. As an example I was able to add value by using risk-adjusted metrics to compare investments[1], or by choosing the right assumptions behind the shareholders[2] taken into account. Additionally, I was able to calculate properly exchange rate risks such as the *translation-* or *transaction risks*[3].

New knowledge

Beginning with new general knowledge, it is important to mention that this project enabled an intensive learning on the industry, on utility company's, on *EDP* and on its competitors, and finally on the global trend of the electricity market. I got more familiar on working with large databases and have deepened my understanding of several countries economic and financial fundamentals.

In terms of methodologies, I learned for the first time complex financial valuation modeling, using extensive strategy and finance concepts based on valuation theory (Tim Koller M. G.)

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[1] *I have used proxies for the Sharpe- and Treynor ratios for investments' comparison*
[2] *We have assumed European shareholders and therefore the risk-free rate was given by ten year German treasury bond return*
[3] *Translation and Transaction risks were computed by the trend and volatility of the local currency exchange rate return versus the Euro correspondingly*

(Tim Koller R. D.). I have acquired econometric skills on bootstrapping and linear discriminant analysis.

Also important to refer is how the project exposed us to a deep use of Office Excel and PowerPoint, with which I have learned to use macros and pivot tables.

Finally, I have digested substantial theory on finance, especially on international corporate finance by reading and applying Shapiro's book (Shapiro, Multinational Financial Management) and Damodaran's paper (Damodaran, Equity Risk Premiums (ERP): Determinants, Estimation and Implications).

Personal experience

The project was a great opportunity to better understand my key strengths and weaknesses. I have realized how much guidance and team support I require when starting a big project from scratch, since I tend to have too many ideas and to disperse. Nevertheless, my capacity to think creatively several times enabled our project to take interesting new steps. When working on the complex excel model my fast execution led to a couple distraction mistakes, which I was always able to correct and improve by doing the extra-mile and being perfectionist at a detail level. I must admit how hard it was for me in the first months to work in the team and distribute tasks, mainly due to the background and commitment differences. Nevertheless, at some point I was playing the role of a natural team leader and I believe I have contributed more as a team member, helping and listening to others, than most of other team members. As final remarks my strong presentation and client relationship skills should be pointed out, and more importantly the ability to assume responsibilities and commitments. I consider to have been too naive and friendly by accepting lack of responsibility of others, which made my life considerable harder.

Benefit of hindsight

My commitment and hardworking attitude, combined with a strong analytical and slightly different background contributed the most to the group work. I believe a more rigorous building of the teams by weighting more background requirements against the project topic would certainly improve the ability to distribute tasks and to guarantee a fairer contribution from each team member, which in turn would most likely improve the motivation and commitment from each one of us.

Bibliography

Damodaran, A. *Equity Risk Premiums.* Stern School of Business, Economics.

Damodaran, A. *Equity Risk Premiums (ERP): Determinants, Estimation and Implications.* Stern School of Business, Economics.

EDP. (2013). *EDP Energias de Portugal*. Retrieved from http://www.edp.pt/en/aedp/unidadesdenegocio/energiasrenovaveis/Pages/EnergiasRenovaveis.aspx

EDP. (2014). *Resultados.* EDP.

EIA. (2014). *International Energy Statistics*. Retrieved May 22, 2014, from http://www.eia.gov/cfapps/ipdbproject/IEDIndex3.cfm

European Comission. (2014). 2030 climate and energy goals for a competitive, secure and low-carbon EU economy. European Comission.

Financial Times. (2012). Euro crisis boosts appeal of 'safe' companies. *Financial Times LTD* .

FitchRatings. *Fitch maintains EDP on rating watch negative.* Milan: www.fitchratings.com.

IMF. (2014). World Economic Outlook (WEO). Washington, D.C. (US): IMF.

Li, J. (2014). *Linear Discriminant Analysis.* The Pennsylvania State University, Department of Statistics. The Pennsylvania State University.

Shapiro, A. C. *Multinational Financial Management* (10th Edition ed.). Wiley.

Shapiro, A. C. (2014). Multinational Financial Management. In A. C. Shapiro, & Wiley (Ed.), *Multinational Financial Management* (10th Edition ed., pp. 476-508). Wiley.

Shapiro, A. C. (2014). Multinational Financial Management. In A. C. Shapiro, & Wiley (Ed.), *Multinational Financial Management* (10th Edition ed., pp. 214-255). Wiley.

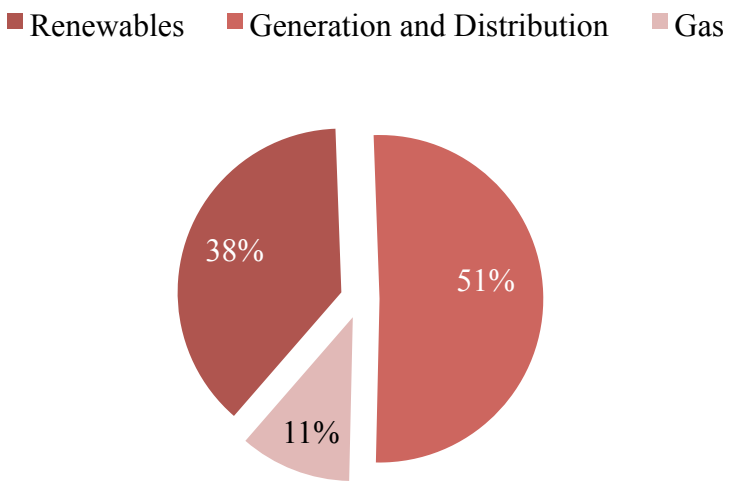
Tim Koller, M. G. *Measuring and Managing the Value of Companies* (5th Edition ed.). McKinsey & Company.

Tim Koller, R. D. *Value.* McKinsey & Company.

Appendix

Appendix 1

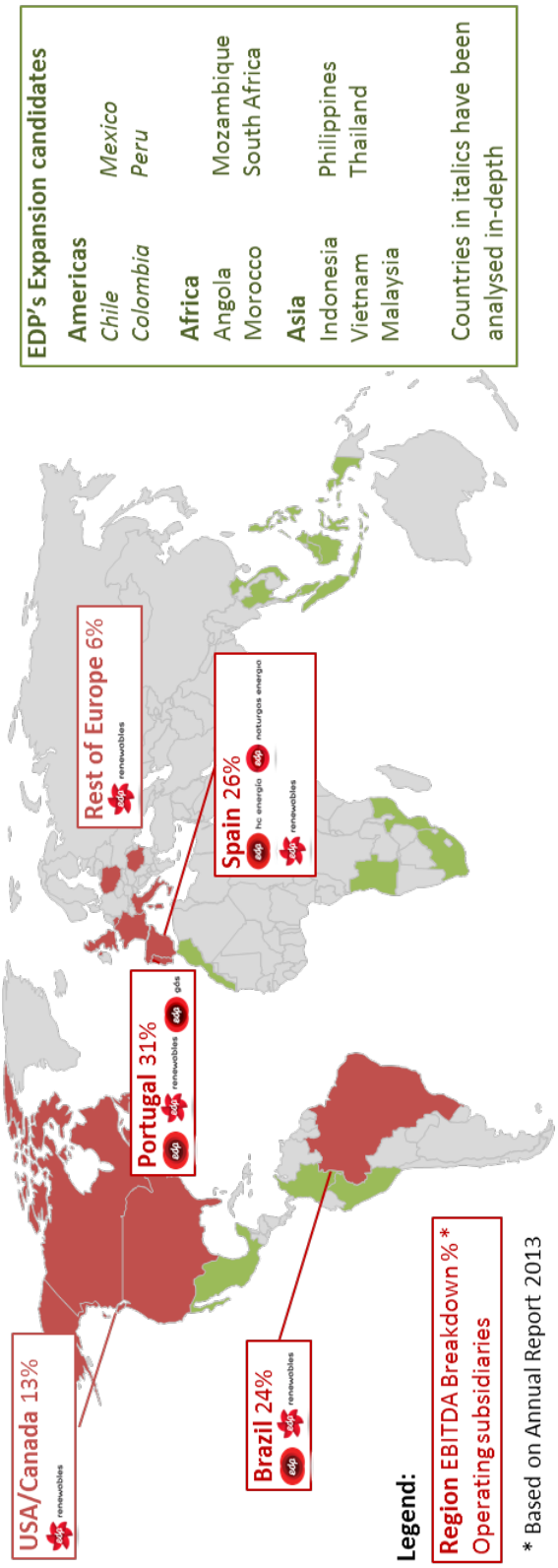
EDP's portfolio by sector*



In EBITDA 2013

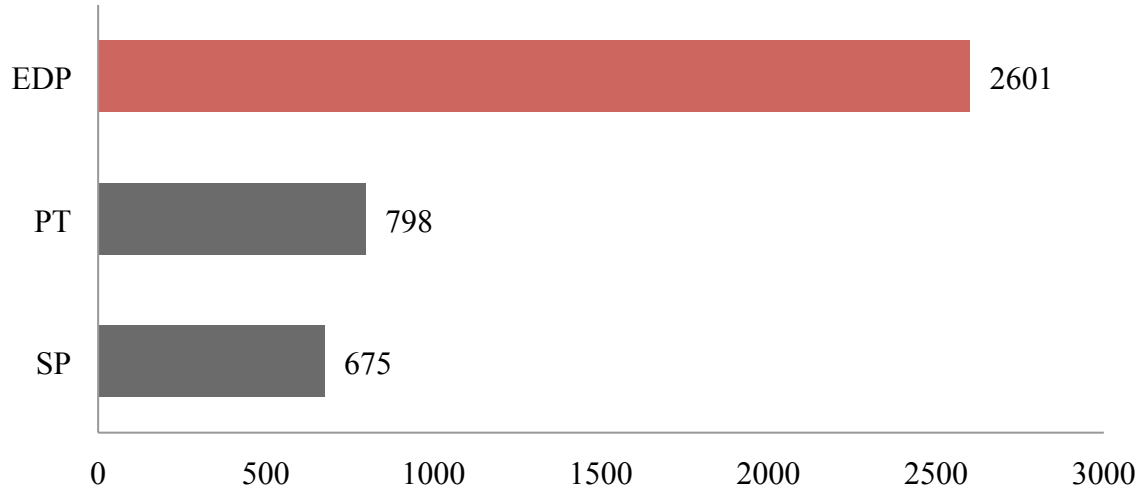
Appendix 2

EDP's portfolio by country



Appendix 3a

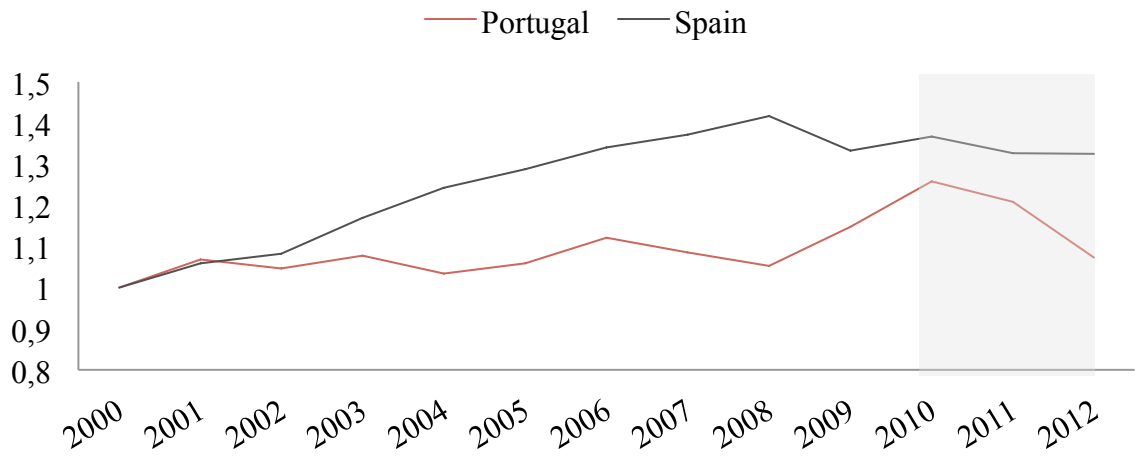
EDP's Exposure to Portugal and Spain*



**In EBITDA 2013*

Appendix 3b

Portugal and Spain Total Electricity Net Generation*



**In Billion Kilowatt hours, Index 2000=100*

Appendix 4

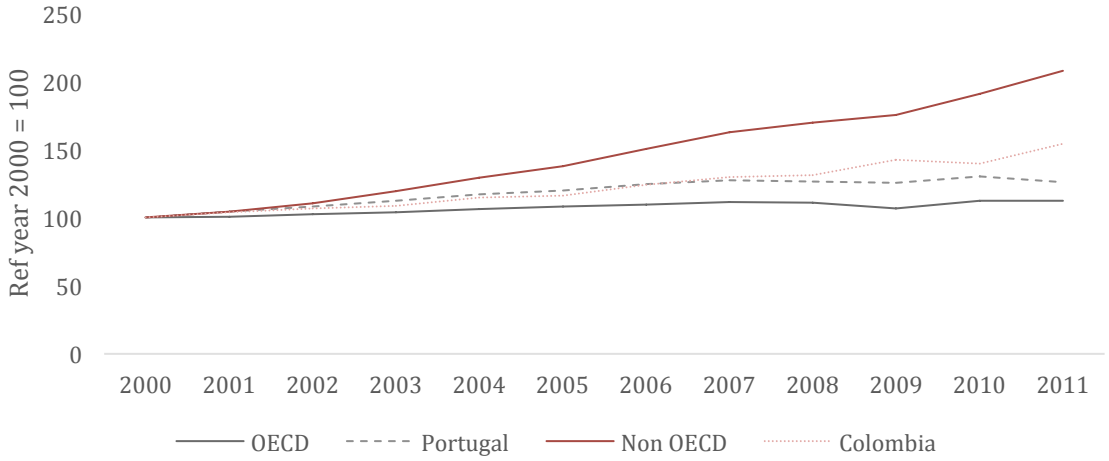
Current credit rating*

	Long-term rating
Standard & Poor's	BB+
Moody's	Ba1
Fitch	BBB-

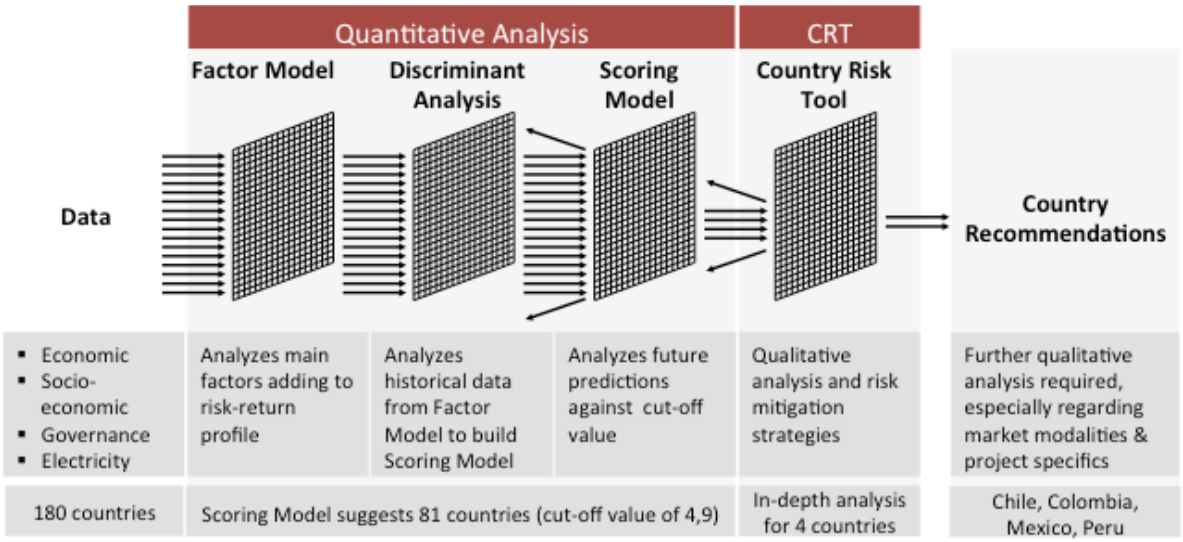
**Source: EDP Investors 13/05/2014*

Appendix 5

OECD versus non-OECD electricity consumption

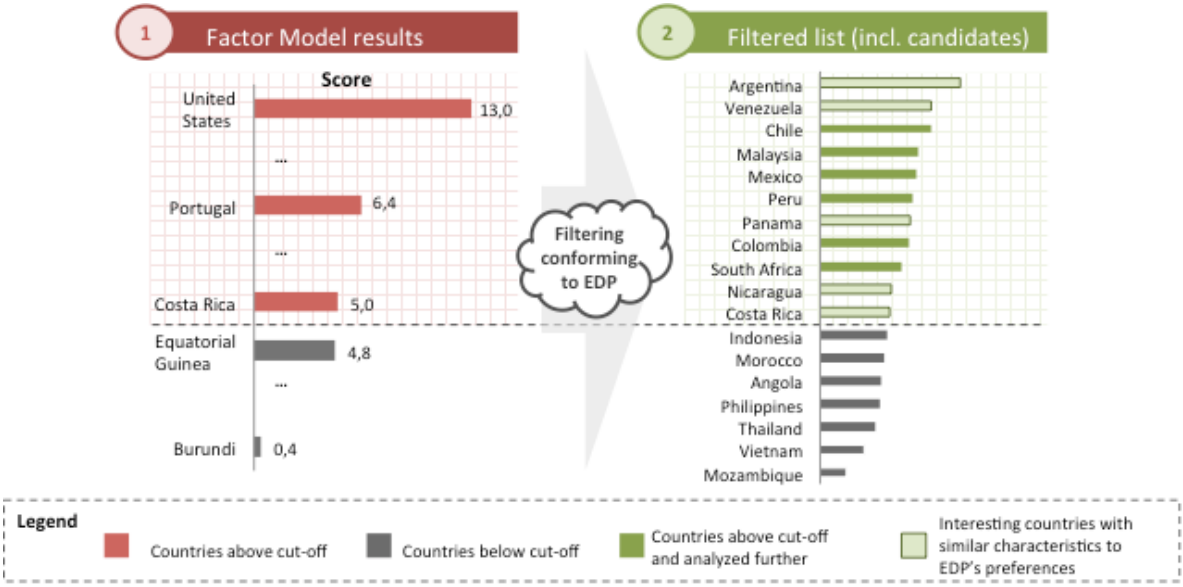


Appendix 6



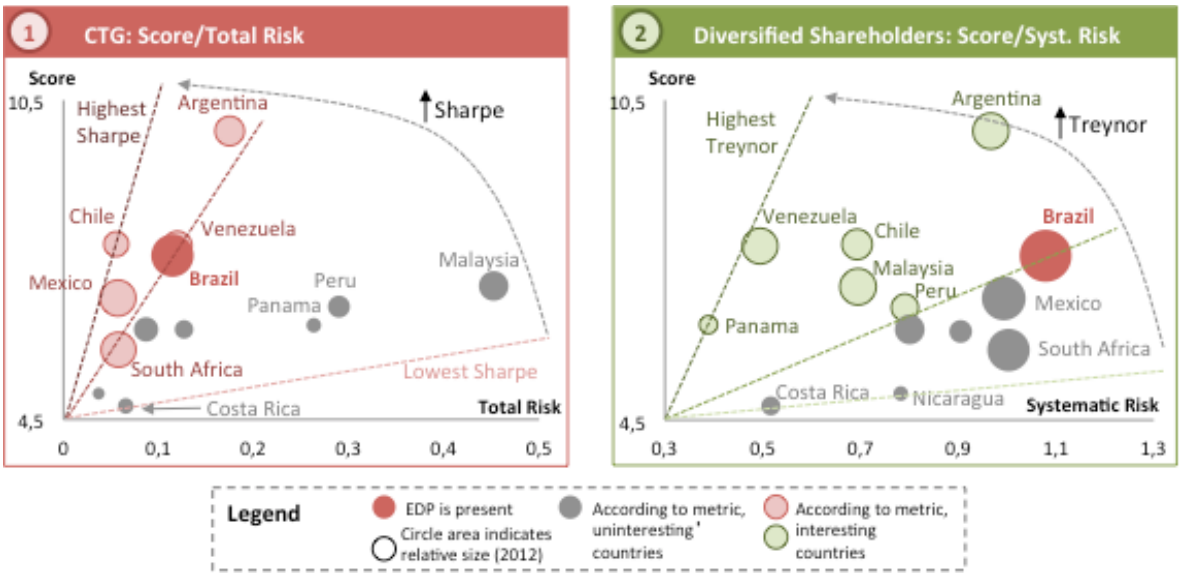
Appendix 7

Model Results



Appendix 8

Risk-adjusted metrics



Appendix 9

$$AI_{i,t} = \left[\frac{Q_{i,t} * P_{i,t}/T_{i,t}}{WACC_{i,t} - g_{i,t}} * \left[1 - \left(\frac{1 + g_i, t}{1 + WACC_{i,t}}\right)^{10}\right] + \frac{Q_{i,t} * P_{i,t}/T_{i,t}}{WACC_{i,t} - g^*} * \left(\frac{1 + g_{i,t}}{1 + WACC_{i,t}}\right)^{10}\right] * \frac{1}{Competitors_i}$$

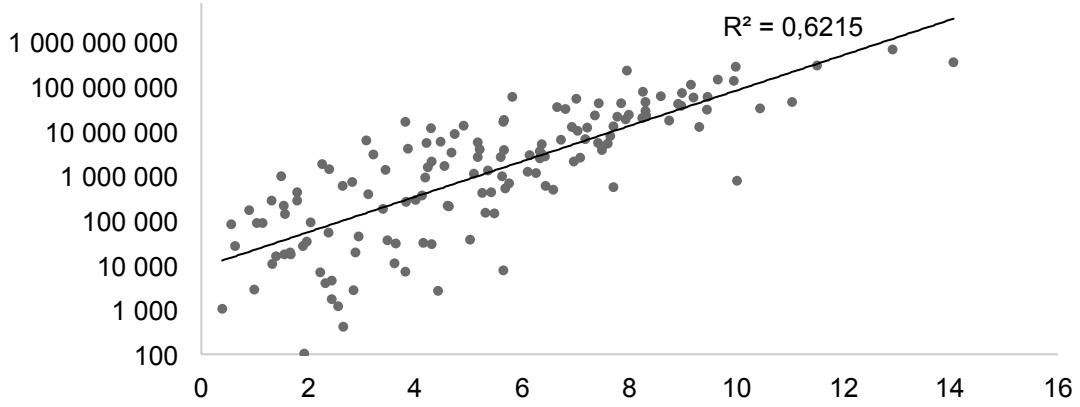
- Quantity [Q]
  - Total electricity generation in each country (EIA, 2014)
- Price [P].
  - GDP per capita as a proxy (IMF, 2014)
- Taxes [T]
  - Total tax rates as percentage on commercial profits
- Growth rate in electricity generation [g]
  - Annuity (or convergence) term for ten years and a terminal value with a consistent sustainable growth rate of 2%
- Cost of capital [WACC]
  - Risk-free rate is the German 10yr treasury bond yield
  - Beta is a market betas based on a country's stock index computed against the MSCI World Index

- Where market performance was not observable, the beta was constructed based on a fundamental and a geographic approach. The average of both was shrinked towards the industry average beta

- Market risk premium
  - Accounts for country-specific risks for each country
- Potential market share [Competitors]
  - Number of competitors within the 75% percentile plus one (to account for the new entrant)

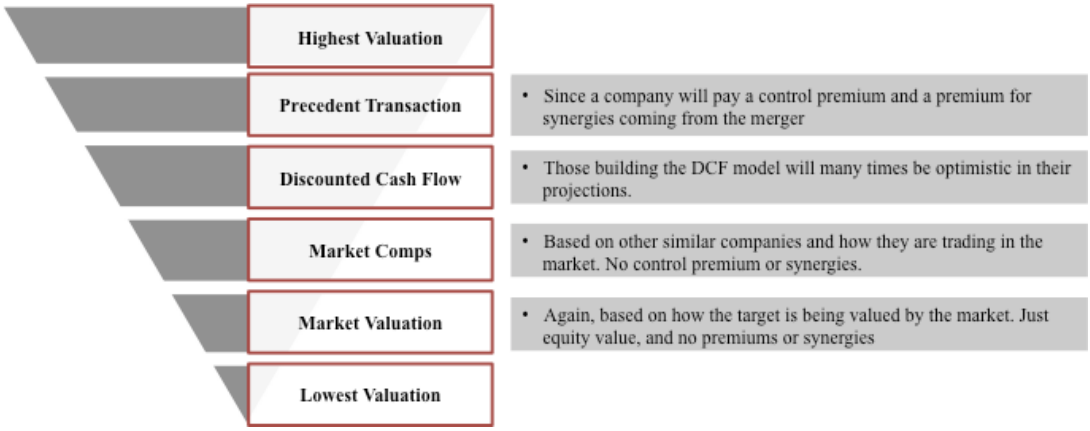
Appendix 10

Attractiveness Indicator 2012



Appendix 11

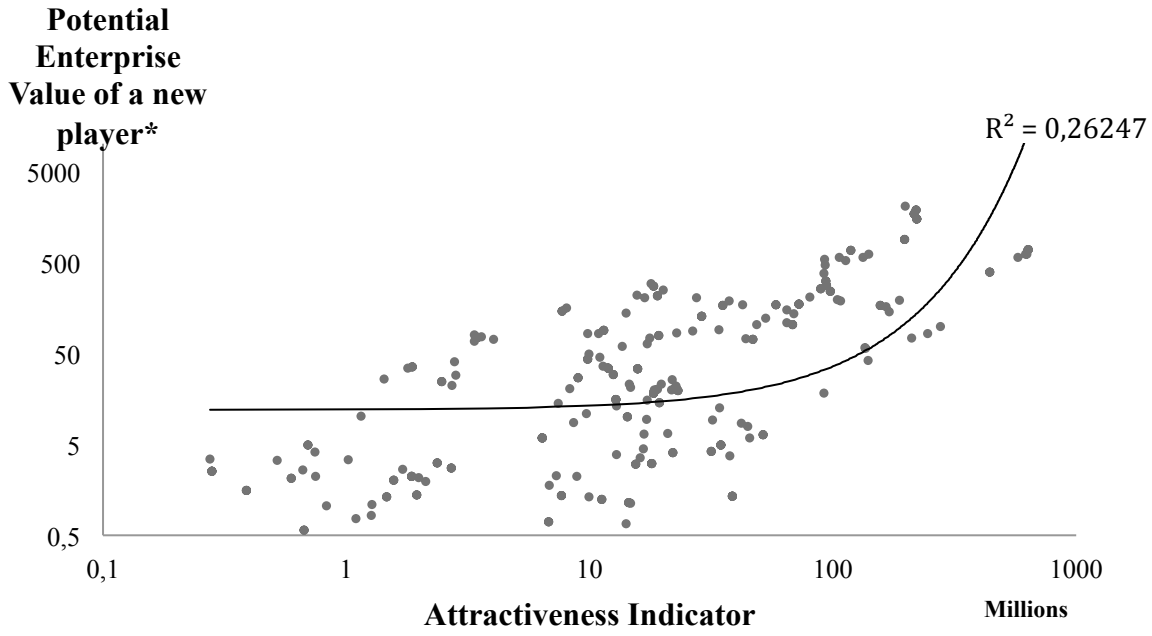
Valuation methods



**Source: Wall Street Oasis, Technical Interview Guide, Third Edition 2010*

Appendix 12

Work Project results



**Potential Enterprise Value of a new player given by the sum of companies' Enterprise Value in a country, divided by the number of biggest players owning 75% of market-share*

Appendix 13

SUMMARY OUTPUT

	Regression Statistics
Multiple R	0,56495022
R Square	0,319168751
Adjusted R Square	0,316423464
Standard Error	28531,94758
Observations	250

	Coefficients	Standard Error	t Stat	P-value
Intercept	5759,244312	2032,479437	2,833605205	0,004981329
X Variable 1	0,000174876	1,62186E-05	10,78242093	1,76008E-22