Building a Visual Model of Valuation Model

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ESD ENGINEERING SYSTEMS & DESIGN

AXA Investment Managers

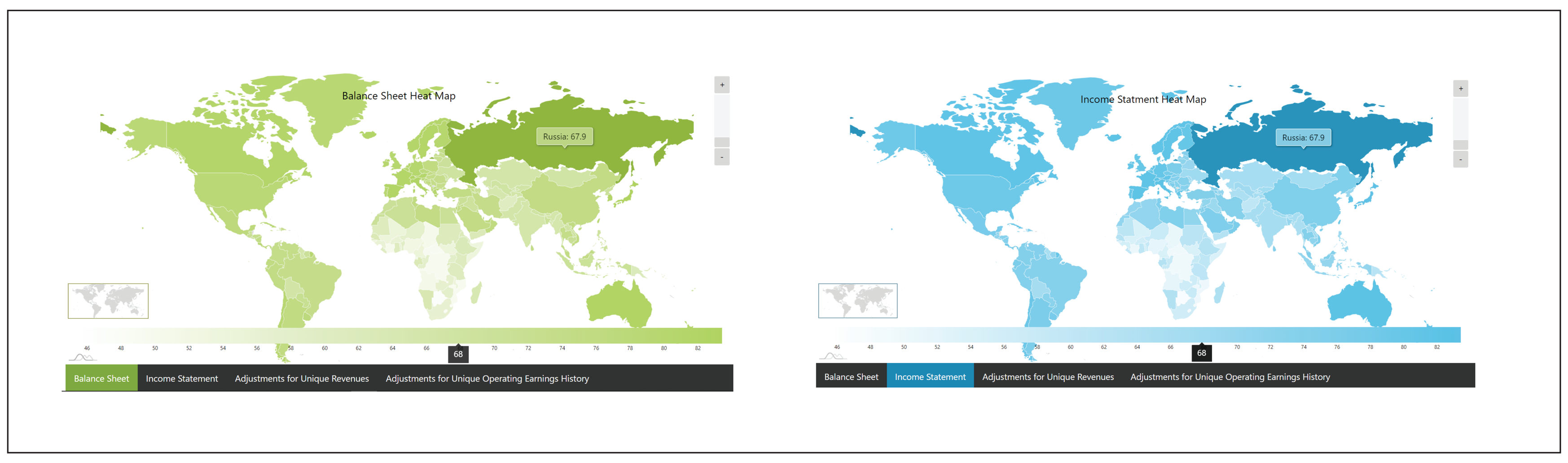
AXA Investment Managers is a global asset manager where they help their clients make the right investment decisions. Today, AXA Investment Managers currently have 20 investment centres all over the world.

Problem Definition

AXA Investment Managers Asia curently uses a comprehensive and sophisticated model to determine the fair value of a company. However, it difficult to explain the model to existing and prospective clients. AXA IM requires an easily understandable visualisation tool to showcase the model's complexity in an interactive manner

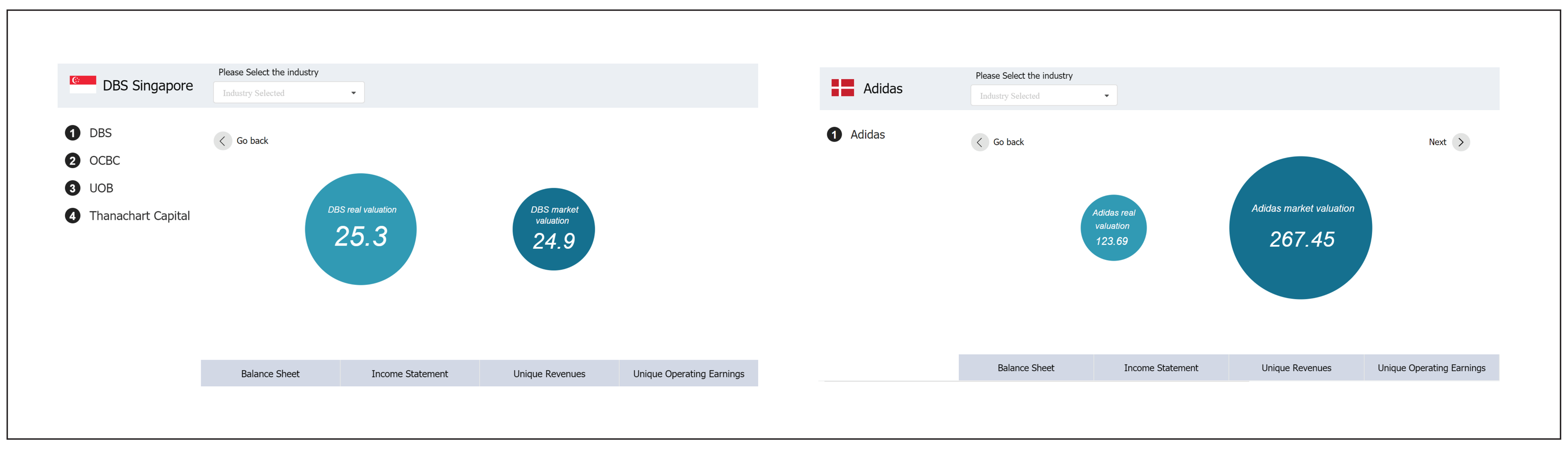
Proposed Visualisation

1 Variation of Country Scaling Factor



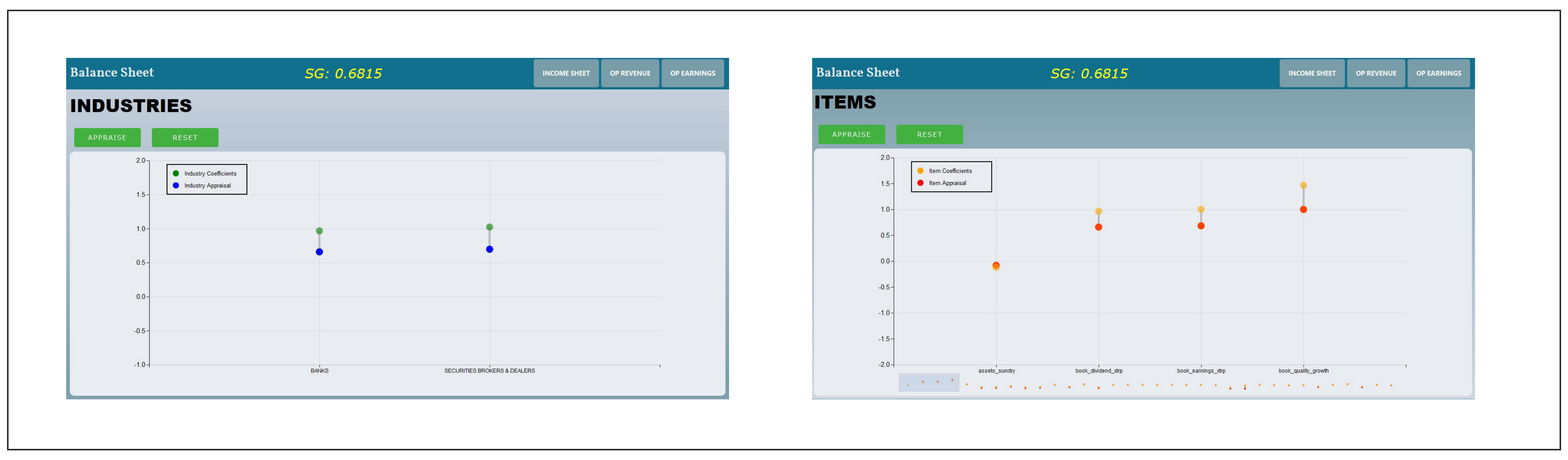
A heat map is created where users can hover over each country to see the values and click on it to explore more.

2 Difference in fair vs market valuation



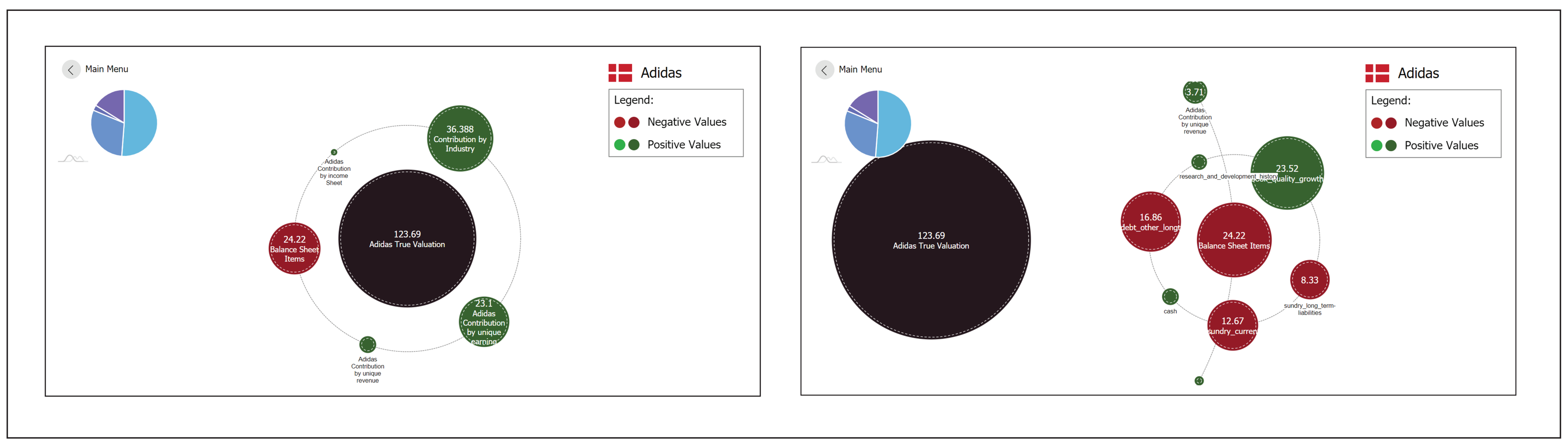
After clicking into each country, users can select the industry and the companies, where they can click on the fair valuation bubble to explore the values of each contribution

3 How coefficient values are affected by country scaling factor



After clicking into each company, users can view the coefficient values and observe how it changes with the influence of country scaling factor.

4 How valuation is calculated for each company

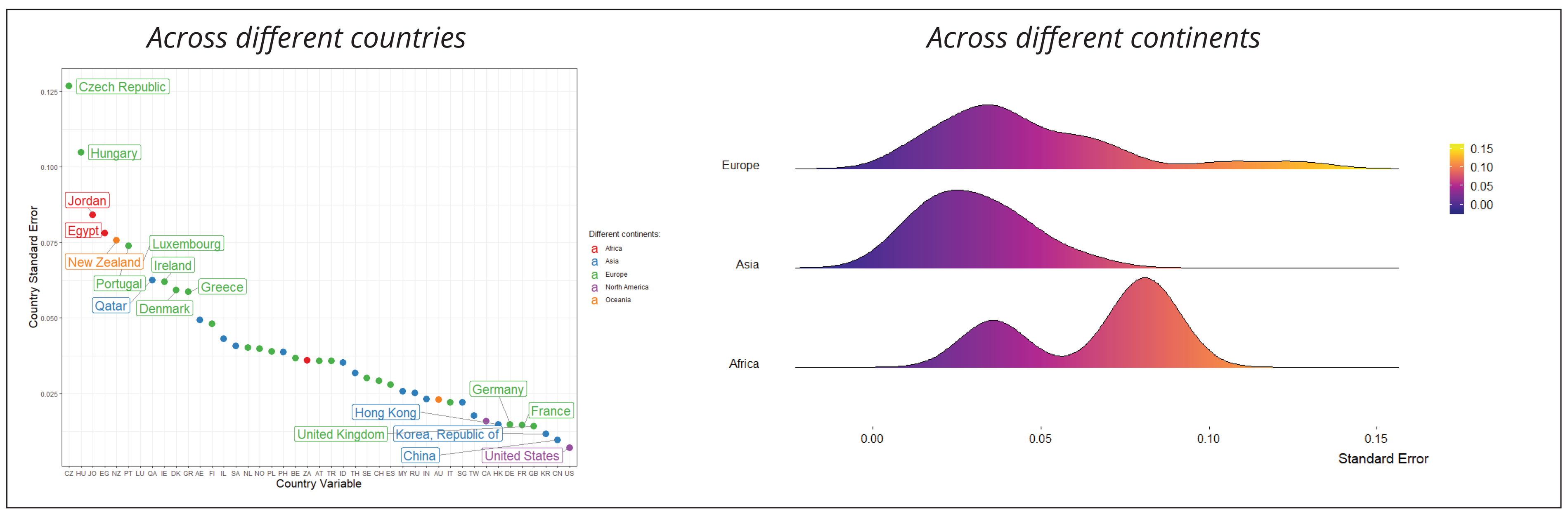


As a summary, users can now view a radial bubble tree chart to investigate the top 5 most and/or least contributions to the company's true value

Analysis of Client Data

Country

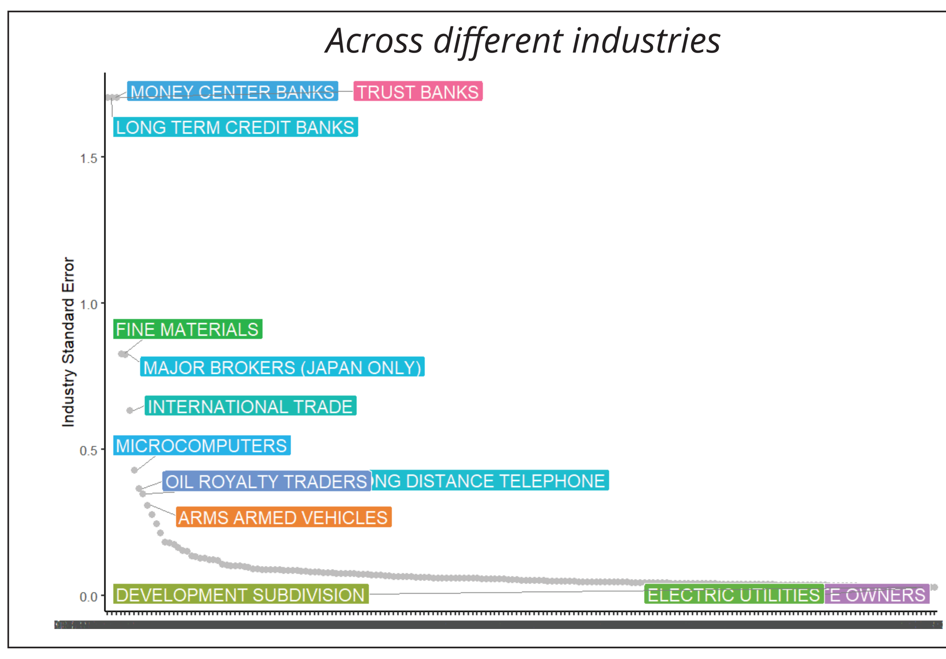
Standard error calculates the deviation of points from the regression model. Therefore, analysing the standard error for country will help us determine the countries that deviate most from the results of the regression model



Based on the analysis above, the countries that deviate from the trend are Czech Republic, Hungary and Jordan while the most stable countries were The United States, China and The Republic of Korea. Also, across different continents, Africa continent seems to be the country that is not in line with the global trend. This could be due to Africa being in the early development stage of its global economy. These results indicate volatility within the country and allows investors to target them as prospective investment opportunities

Industries

Similarly, the standard error for Industries will determine which industry is more volatile. Investing in industries that are more volatile is an indication that investors can obtain more returns, though some might prefer to invest in more stable industries.



Based on the results above, long term credit banks, trust banks and money center banks are the most volatile and the more stable industries are electric utilities, real estate owners and Development Subdivision