Hazy Days, Hazy Forecasts? PM2.5 Pollution and Sell-Side Analyst Forecast Accuracy

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Dr. Henry and Dr. Lin are to study the relationship between a sell-side analyst's local air pollution (i.e., PM2.5 fine particulate matter) and the accuracy of quarterly earnings forecasts. Analysts serve an important role as information intermediaries in the equity market, and studies show their earnings forecasts influence investor expectations of firm-level earnings. Prior research suggests a negative link between air pollution and the quality of analyst output in China, as well as non-analyst performance in the U.S. However, the relationship between analyst output and air pollution in the large and highly developed U.S. market remains unstudied.

Using a large data set of quarterly earnings per share (EPS) forecasts by analysts, Dr. Henry and Dr. Lin will compare the forecast accuracy of analysts exposed to high versus low levels of daily air pollution during the forecasting period. By comparing across analysts within the same firm and quarter, Dr. Henry and Dr. Lin rule out differences in forecast error stemming from variation in firm characteristics or market conditions. Daily, county-level PM2.5 data are from the U.S. Environmental Protection Agency. Our findings will establish a link between air pollution and the dissemination of financial information in developed countries, highlighting the importance of sustainable development.

Dr. Henry and Dr. Lin will examine the effect of environmental sustainability (i.e., air quality) on accounting & finance activity. This research topic relates to several of the United Nations Sustainable Development Goals (SDGs), specifically Good Health and Well-Being, Sustainable Cities and Communities, and Responsible Consumption and Production. Analyst information production affects the allocation of capital and shareholder welfare. To the extent that it adversely affects analyst output in the U.S., managers have an incentive to reduce air pollution levels and can help achieve this reduction through responsible leadership.