6. Summary and Conclusions

6.1. Summary of this study

Every month, the International Energy Agency (IEA), the organization set up by the industrialized economies in the mid-1970s to monitor global oil markets in the wake of the 1973 oil crisis, publishes its Oil Market Report. Most oil analysts base their supply and demand models on data generated by IEA. We collected relevant reports and find that 11 of the 50 largest positive returns and 7 of the 50 largest negative returns in WTI oil prices are associated with the announcements in IEA in our sample period. Therefore, this article provides detailed examinations of the importance of IEA’s reports regarding oil supply and demand forecasts. The analysis is conducted using event study over the period from October 1990 to December 2005.

By examining price changes of oil-related markets for IEA’s reports, we document evidence for the importance of IEA’s reports and explore these prices respond negatively to the release of the report. Analysis of the effects of forecast changes on non-OPEC supply shows that the change of output in non-OPEC countries regardless of decreased or increased supply plays an important role in affecting oil-related market except for Norway. Moreover, the evidences of the change of oil demand from North America and China in IEA’s reports show that British and Norwegian oil stock markets have a great reaction. We provide empirical evidence that these companies are concerned more about the related releases of decreased demand in North America and increased demand in China. Our results for the analysis of event study show the following conclusions. First, IEA’s reports actually lead to price changes of oil-related markets, because almost one half of 202 oil-related companies have a striking performance around the release of IEA’s announcements. Second, evidence shows that the world’s international traded IPE Brent Crude futures is really affected by IEA’s reports, particularly for the change of demand in North America because North America is a considerably big market of oil demand for the exporters in Europe. Third, the effects of IEA’s report vary considerably across different countries depending on their production and consumption of oil reserves, the oil intensity of output, and tax. The results show that all countries except for Japan that has no oil production, a low oil intensity of economy, and higher share of taxes in the prices of gasoline have a striking response to the announcements. Besides, demand factors,
particularly for oil demand in China, seem to influence these oil-related companies more greatly than supply factors. Finally, the regression results, examining the cumulative abnormal returns relative to the impact of IEA’s reports, suggest that the United States and Norway have the largest responses to IEA’s reports. We also find that the cumulative abnormal returns around the announcement date mainly come from the change of demand in North America and China and the market value in individual company.

The main contribution of our paper is that we show the IEA’s reports indeed play an important role to the price changes in the oil-related markets. It provides useful information to the oil market and participants in the oil market await these forecasts to make trading decisions. In other words, they are important in facilitating the resource allocation process and providing reliability in the market. It is therefore beneficial if market participants can use these announcements as prudent signals for managing their trading positions better. For example, knowing in advance the change in oil supply and demand helps the oil-related companies make decisions about storing or selling stocks in oil and hedge appropriate quantities for their stock. Individual investors who buy the shares of these oil-related companies can also base on the supply and demand forecasts generated by the IEA to understand why oil prices changed and design a more successful investment strategy. Although some recent studies cast doubt on IEA’s credibility and importance as a forecaster, we think that as long as IEA take appropriate corrective actions, its reports may still be a useful resource to provide reliable information to the oil market.

6.2. Suggestions for future research

Our study raises further questions to be answered by future research. First, we use daily returns to do empirical analysis. However, once IEA’s Oil Market Report announces at 9:00 am in local London time, the announcement effect may diminish with the passage of time. Furthermore, the Exchanges in the oil market have been traded 24 hours a day recently. It may be difficult to accurately catch the announcement effect in this situation. Therefore, we suggest it may be a good idea for future event study research to use intraday data to measure the impact of IEA’s releases on the oil market. By this way, we think it can also avoid the problem of time differences in different countries.
Second, we confine our discussion to the classifications of the change of supply in non-OPEC, demand in North America and China that are obviously important for oil-related markets as a result of limited time. There are other classifications of forecasts of oil data in IEA’s reports. We commend this focus to future research endeavors.

Furthermore, the main limitation for the present study is that the sample comprises of only six countries, and we only obtain 9 companies in France and the United Kingdom which is due to data constrains. The limited samples may affect the empirical significance in our study. Consequently, if the samples for individual companies in these six countries can be expanded, we think it may provide more suitable sample representation. Besides, it would also be interesting to carry out analysis by dividing the sample for individual company in oil-sector (for example, the sectors of oil equipment and service, integrated oil and gas, and gas distribution). This is not feasible because the number of companies in our sample companies is too small if we divide into sectors.