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## **WHO'S A MAJOR?**

### **A NOVEL APPROACH TO PEER GROUP SELECTION: EMPIRICAL EVIDENCE FROM OIL AND GAS COMPANIES**

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#### **Overview**

This study presents a novel approach to selecting comparable companies in equity valuation. Equity valuation is one of the most important applications of finance theory. Although academics advocate the use of the discounted cash flow model (DCF) and its derivative, the residual income valuation model (RIV), valuation by multiples is undoubtedly the most common method of equity valuation in practice. Survey-based evidence suggests a dominant role for the price-earnings ratio among analysts in determining and evaluation share prices. Valuation multiples are also used in valuation of initial public offerings (IPOs), investment bankers' fairness opinions, leveraged buyout transactions (LBOs), seasoned equity offerings, and other merger and acquisition activities, M&A).

An adequate process for selecting comparable firms is a necessary prerequisite for valuation by multiples. Typically, comparable companies are selected from the same industry. The underlying assumption is that these firms share the same risk, profitability and accounting methods. An important conclusion that can be drawn from prior research is that industry membership is an important factor in selecting comparable firms. Hence, we focus on one important industry - oil and gas. The oil and gas industry contain some of the worlds largest companies, and also has a clear structure for grouping the companies – majors, independents, international. The industry is accordingly well structured to investigate the value relevance of such groups. For the companies the groupings are important because of the way analysts investigate relative financial performance, and therefore for the companies' cost of capital.

#### **Methods**

The crucial issue relates to the criteria for peer groups construction. It can be argued that the choice of comparable firms should be a function of the variables that drive cross sectional variation in a given valuation multiple. Using theoretical models augmented with additional variables suggested by the empirical literature, we propose an empirical model for the relationship between valuation model and financial indicators. Using 20 of the largest oil and gas companies we investigate whether conventional peer groups (majors, independents, internationals) constitute homogenous economic groups (i.e. similar relations between value drivers and valuation multiples). Using Chow tests we test for structural shift in the relation between valuation and value drivers across companies. Starting with a group consisting of the five super majors (ExxonMobil, BP, Royal Dutch Shell, Total and Chevron), we test for a structural shift between this group and a potential super major (the largest among our sample of the 20 largest oil and gas companies). The null hypothesis is that the valuation model for the group of five super majors and the potential new super major is the same. If the hypothesis is rejected, i.e. a structural break, this indicates that the

potential super major should not be included in this peer group. This process is carried out for all the companies in the sample (less the original five super majors).

### **Results**

Our results provide evidence that the Chow test can be used to identify peer groups. From our sample, we are able to identify three companies that can be included in the super major peer group, while the remaining 13 have valuation processes that are structurally different from the majors.

### **Conclusion**

The Chow test for structural shift is a methodology that can be used to identify peer groups that have similar structures in their valuation process. Applying the test to 20 oil companies, we find that eight companies including all the majors have a similar structure in their valuation process. We do not find that other groups of firms have a structurally similar valuation process. This means that comparison of firms in groups such as independents and internationals are likely to result in large variation in the companies' perceived performance since the measures show the differences in the valuation process rather than the differences in economic performance.