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Commonality in news around the world ☆

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A B S T R A C T

Motivated by the pioneering study of Morck, Yeung, and Yu (2000), this paper investigates whether and how news commonality varies according to a country's institutional environments. Using a unique global news data set across 41 countries for the 2000–2009 period, we document three notable findings. First, firm-level news comoves more in countries with weaker institutional environments than in those with stronger institutional environments. Second, news commonality is positively associated with both stock return comovement and stock liquidity commonality. Third, the effect of news commonality on stock return and liquidity comovement is higher in countries with stronger institutions than in those with weaker institutions. These results suggest that a country's institutional environments affect firm-specific information production and, more importantly, support the information-efficiency view that lower price synchronicity is caused by greater capitalization of firm-specific information.

1. Introduction

Previous empirical studies document significantly higher stock return comovement in countries with poor investor protection (Morck, Yeung, and Yu, 2000) and opaque information environments (Jin and Myers, 2006).[1] The rationale for these findings is that sound institutional characteristics and transparent information environments increase the market's incentive to explore firm-specific information and facilitate the incorporation of information into stock prices, which reduces stock return synchronicity and enhances market efficiency (Morck, Yeung, and Yu, 2013). Theoretically, this explanation is supported by both Jin and Myers's (2006) model of risk bearing and Veldkamp's (2006) model of competitive information markets.

Despite the intuitive explanation for this intriguing observation, there remains an unsolved question about how the quality of a country's institutions relates to the flow of firm-specific information into its market (e.g., Griffin, Kelly, and Nardari, 2010; Bartram, Brown, and Stulz, 2012). Furthermore, the information-based explanation for stock return comovement has been challenged by other studies' inconsistent findings on the relation between stock return comovement and measures of stock price informativeness (e.g., Mashruwala, Rajgopal, and Shevlin, 2006; Pontiff, 2006; Kelly, 2007; Teoh, Yang, and Zhang, 2007; Hou, Peng, and Xiong, 2013).

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[1] We use the terms "stock return comovement" and "stock return synchronicity" interchangeably throughout the paper.

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These contradictory findings are likely driven by the manner in which firm-specific information is measured. Although a direct measure of firm-specific information is essential, there have been few attempts to resolve this issue.[2] Therefore, in this study, we directly examine whether and how a country's institutional environments affect the production of firm-specific information flows and whether this information production channel contributes to commonality in both stock returns and stock liquidity.

We rely on a unique global news data set to identify the informational content of news, and we focus on news articles commonly used by institutional and sophisticated individual investors. Specifically, we construct an international sample with real-time news releases at the firm level collected by RavenPack across 41 countries between 2000 and 2009.[3] RavenPack not only provides the flow of news articles (i.e., news coverage) related to a firm but also quantifies the positive (or negative), value-relevant information (i.e., news-sentiment score) in each news article based on professional algorithms.[4] For example, a news article on a corruption scandal involving a firm's executives is associated with a low news-sentiment score, and a news article regarding the successful development of a firm's new product is associated with a high news-sentiment score.

We gauge firm-specific information production using comovement between firm- and market-level news events (hereinafter, news comovement or news commonality), all of which are disclosed and disseminated by the media. Specifically, news commonality is defined as R^2 based on the regression of a firm's news-sentiment scores on the market's news-sentiment scores. The intuition behind this measure is that if a firm's news events have more market-wide informational content than firm-specific fundamentals, then the media's production of information about that firm is less firm-specific and thus, greater news comovement results in larger commonality in stock returns and stock liquidity. This measure allows us to conduct a direct test of the effect of country-level institutional infrastructures on firm-specific information production.

Motivated by the literature on institutions, stock return comovement, and the media (e.g., Morck, Yeung, and Yu, 2000; Jin and Myers, 2006; Veldkamp, 2006), we propose three hypotheses to test the effect of institutional environments on firm-specific information production.[5] First, strong institutional infrastructures increase the media's incentive to explore firm-specific information and facilitate information dissemination. This outcome leads to lower news commonality in countries with strong institutional infrastructures. Second, if the information-based interpretation of stock return comovement holds, then stock return comovement should be positively related to news commonality. Furthermore, to the extent that market-wide information reflected in the news forces investors to trade in stock portfolios instead of individual stocks, stocks with high news commonality should also have greater commonality in stock liquidity. Third, the effect of news commonality on stock return comovement and stock liquidity comovement should increase with the strength of institutional infrastructures.

Our results support all three hypotheses. We find that news commonality is significantly higher in countries with poor institutional characteristics. The magnitude of our results is economically significant across proxies for institutional environments. For example, a decrease of one standard deviation in the good government index variable (*GGov*) leads to an increase of 36.2% of the standard deviation in news commonality. Similarly, a decrease of one standard deviation in the accounting standard index variable (*Accsta*) is associated with an increase of 41.7% of the standard deviation in news commonality. The evidence is robust for different proxies of institutional environments and alternative methods for estimating news commonality, whether we conduct the analysis at the country level or the firm level and with or without controlling for various country-level and firm-specific variables that may be correlated with firm-specific information production. To mitigate the endogeneity concern, we also adopt an instrumental variable approach, which provides a causal link between institutional environments and news commonality.

To test the second hypothesis, we use R^2 obtained from the regression of individual stock returns on respective market returns and U.S. market returns as a measure of stock return comovement (Roll, 1988; Morck, Yeung, and Yu, 2000; Jin and Myers, 2006). Comovement in stock liquidity is measured as the R^2 from the regression of the weekly percentage change in individual stock liquidity on the weekly percentage change in market liquidity. We find that both stock return and stock liquidity comovement are positively associated with news commonality. These findings provide direct evidence that the availability of firm-specific information is an important factor driving both firm-specific stock return variation and stock liquidity commonality.

Finally, we find evidence consistent with the hypothesis that the effect of news commonality on stock return comovement and stock liquidity comovement is stronger in countries with stronger institutional structures.

[2] The only concurrent paper with an approach to measuring firm-specific information similar to ours is the research by Boudoukh, Feldman, Kogan, and Richardson (2013). However, their data source and research questions differ from those used in our paper. Additionally, Boudoukh et al. focus on Standard & Poor's (S&P) 500 companies (791 companies), whereas we focus on international markets with an emphasis on the role and quality of institutions in contributing to the effect of firm-specific information on stock comovement.

[3] Given that the media, including newswires and publications, constitutes one important component of a country's information environment for disseminating information to the public (Bushman, Piotroski, and Smith, 2004) and that investors rely on newswires and publications as primary information sources for investment (e.g., Roll, 1988; Griffin, Hirschey, and Kelly, 2011), the news data set allows us to examine the role of information. The news data set is described in more detail later in the paper.

[4] These professional algorithms were developed and evaluated by effectively combining traditional language analysis, financial expert consensus, and market response methodologies.

[5] We provide a detailed literature review and hypothesis development in Section 2.