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Press freedom and jumps in stock prices

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ABSTRACT

Press freedom varies substantially across countries. In a *free* environment, any news immediately becomes public knowledge through mediums including various electronic media and published materials. However, in an *unfree* environment, (economic) agents would have more discretionary powers to disclose good news immediately, while hiding bad news or releasing bad news slowly. We argue that this discretion affects stock prices and that stock markets in countries with a free press should be better processors of economic information. Using an equilibrium asset-pricing model in an economy under jump diffusion, we decompose the moments of the returns of international stock markets into a diffusive risk and a jump risk part. Using stock market data for a balanced panel of 50 countries, our results suggest that in countries with a free press, the better processing of bad news leads to more frequent negative jumps in stock prices. As a result, stock markets in those countries are characterized by higher volatility, driven by higher jump risk and more negative return asymmetry. The results are robust to the inclusion of various controls for governance and other country- or market-specific characteristics. We interpret these as *good* stock market characteristics because a free press improves welfare and increases economic growth.

1. Motivation

"The importance of a free press has been so axiomatic that its presumed benefits have seldom been questioned, . . . There has been a good deal of discussion about the costs of press freedom when it clashes with other rights, such as citizen privacy, fair trials in the courts, or national security needs. But the belief that the benefits outweigh the costs because a free press is essential to sustaining American democracy has remained beyond doubt."

In an influential article on press freedom and general welfare, Graber (1986) elaborates on the benefits and costs of press freedom. The statement could well be taken from the ongoing discussion after the NSA surveillance scandal, but in fact relates to the debate in the 1980s. Since then, the role of press freedom in countries' economic development has not received a lot of attention in the literature. At the same time, in contrast to common belief, the part of the global population enjoying a free press continues to decline. Interestingly, the recent European sovereign debt crisis coincides with a substantial decline in press freedom in the European Union, traditionally one of the best-performing regions. For example, in the last report of the 'Reporters without Borders' for 2013, Greece ranked 99th out of 180 countries, a 64-place drop from four years before. During the crisis, the Greek media endured widespread staff cutbacks and closures of outlets. Additionally, journalists faced substantial pressure from owners and politicians. The media was no longer in a position to inform citizens adequately about

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critical issues like election campaigns, austerity measures and corruption. For example, there were cases of politically motivated firings and suspensions at both the state and the private media level. Journalist Kostas Vaxevanis was arrested and charged with violation of privacy for publishing a list of prominent Greeks who had transferred funds to Swiss bank accounts in order to avoid paying taxes in Greece.[1] Another example is Hungary. The country came in 64th place, a 41-place drop from three years before. However, the problems in Hungary cannot be attributed to economic factors alone. Since Prime Minister Victor Orban took office in 2010, press freedom has eroded both legally and politically. His new government adopted a new media law that implemented content restrictions and heavy fines. Apparently, the economic crisis has contributed negatively to existing problems in the media environments of Europe, such as, among others, the close relationship between politicians and media owners, government hostility towards critical reporting, and violence against journalists in the course of their work. Recently, we also experienced similar situations in other developed countries. In December 2013, Prime Minister Shinzo Abe passed a forceful new secrecy law in Japan. The "Specially Designated Secrets Protection Law" poses a severe threat to news reporting and press freedom. Government officials have not shied away from intimidating reporters in the past, and the new law will grant them greater power to do so. The country took 59th place in the most recent press freedom ranking, a 48-place drop from three years before. Other leaders of the democratic world like the United Kingdom are also not without problems. For example, press freedom advocates are not satisfied with the conclusions of the November 2012 Leveson report, which suggested the adoption of statutory press regulations to solve the ethical crisis revealed by a scandal over illicit phone hacking by journalists. The use of super injunctions also poses a threat to freedom of expression. Similarly, from 2010 to 2013 press freedom in the United States has suffered one of the most significant declines recently, partly due to sacrificing information to national security, with the NSA surveillance scandal topping the list of wrongdoings. The US took 46th place, a 26-place drop from three years before (see Fig. 1).

In contrast, Luxembourg always ranks at the top of the list, while China can typically be found at the bottom, placed 175th in the most recent ranking. Interestingly, press freedom scores do not necessarily correlate with governance indicators or other measures that are used to assess the development of a country. A good example is Singapore, currently in 150th place out of 180 countries in terms of press freedom, but highly rated in terms of the World Bank governance scores like rule of law or the United Nations Human Development Index.[2]

The previous literature provides no guidance on how a country's press freedom affects the news-returns relationship in stock markets. Proponents of the efficient markets hypothesis would claim that investors incorporate new information into asset prices in a correct and timely manner. Bayesian rationality is assumed to be a good description of investor behavior (Fama, 1965, 1970). However, the quality of information processing differs substantially across countries. Media or press freedom reflects the degree of freedom that journalists or news organizations enjoy in each country, and the efforts made by the authorities to respect and ensure respect for this freedom. In a 'free' environment, any news become public knowledge immediately through mediums including various electronic media and published materials. In an 'unfree' environment, the media become strategic goals and targets for groups or individuals who attempt to control the news. We argue that stock markets in countries characterized by a high degree of press freedom are better processors of economic information. In those markets, economic agents would have no discretion to hide bad news or to release bad news slowly. However, stock markets in countries characterized by a low degree of press freedom tend to have a poor quality of information processing. In those markets, economic agents would have greater discretion to hide bad news or to release bad news slowly, which at the stock market level would be reflected in a lower frequency of negative jumps in stock prices. The effect can be expected to be asymmetric, because agents would have no interest to hide good news. Hence, stock markets in countries characterized by an unfree press are likely to experience lower volatility and more positive return asymmetry in stock prices.

2. Literature review

Since the early work of Stigler (1961), research in information economics has made substantial progress. It is well understood that information is imperfect in markets and that information asymmetries have far reaching consequences. Akerlof (1970) studies product quality uncertainty, a kind of information asymmetry between a buyer and a seller. He shows that the market may face an adverse selection process. While good quality products may leave the markets, only "lemons" stay. This might lead to a market shutdown.

Information asymmetry can also induce an incentive problem. In an insurance context, Arrow (1978) shows that if consumers and firms have insurance, they will lack incentives to take measures to reduce or mitigate risks. Therefore, the market equilibrium can be far from perfect because of the impact of imperfect information and not only because of information costs. Furthermore, this can stop markets from developing.

The consequences of information asymmetry are now much better understood. In most of the earlier studies, the level of information asymmetry is typically taken as given. Little attention is paid to cross-country differences in *soft* informational

[1] See the "Euro Crisis in the Press" blog of the London School of Economics and Political Science (blogs.lse.ac.uk) for more details.

[2] The rule of law, as categorized by the World Bank, captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. The United Nations Human Development Index measures the average achievement of a country in key dimensions of human development. It was created to emphasize that people and their capabilities, and not necessarily economic growth alone, should be the ultimate criteria for assessing a country's development.

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