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Creditor rights and the corporate bond market ☆

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This study examines whether investor protection affects capital markets, specifically the development of corporate bond markets versus equity markets. Using a dataset of 42 countries, we show that countries with strong creditor rights have more developed corporate bond markets than equity markets. However, we find only weak evidence that countries with stronger shareholder protection have more developed equity markets than corporate bond markets. Additionally, we find that the effect of financial reforms on capital markets is strongly dependent on the strength of investor protection and on the associated information disclosure in a given country.

1. Introduction

In their seminal paper, La Porta et al. (1998) document that legal origins influence a country's law regarding creditor and shareholder rights, its level of bank credit, and its stock market development. Their results indicated that equity markets are more likely to be established in countries with common

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law origins than those with civil law origins. Well-developed equity markets, in turn, facilitate securing financing for firms' investments (Rajan and Zingales, 1998).

Thus far, the literature has primarily concentrated on equity markets and the development of the structure of capital markets, even though corporate bond markets are an important aspect of capital markets. According to Tendulkar and Hancock (2014), corporate bond markets have almost tripled in size since 2000, reaching $49 trillion in 2013. Although growth slowed as banks began to deleverage their balance sheets following the 2008 financial crisis, the amount outstanding from non-financial firms has continued to expand. Indeed, according to the "spare tire view," a financial crisis can be mitigated if a country has the legal infrastructure that allows the capital market to provide alternative financing to firms when their banking systems cannot be used. Recently, Levine et al. (2016) showed that in countries with stronger shareholder protection laws, firms increase the volume of equity issuances in response to systematic banking crises. These findings are particularly strong for firms that depend heavily on external financing. Hence, shareholder protection ameliorates the adverse effects of banking crises by providing alternative financing through the equity market.

In response to a banking crisis, due to similar characteristics to bank loans, corporate bonds are more suitable than equity for firms in need of alternative financing (Boyd and Smith, 1998). On average, the bond yield is lower than the bank interest rate for even the lowest-risk borrowers, but bond issuance is limited to firms with large sales revenues (Russ and Valderrama, 2012). The higher marginal cost of bank lending stems from the specialization of banks, which require significant resources to acquire information and monitor borrowers. In contrast, bonds are acquired by a dispersed pool of investors who cannot or choose not to monitor the activities of the issuers. This, therefore, is commonly also referred to as "unmonitored" lending (Russ and Valderrama, 2012). These differences may also explain why the corporate bond market is more resilient during recessions or times of financial distress than the banking sector. De Fiore and Uhlig (2015) showed, however, that during the financial crisis of 2008, the shift in corporate debt from bank finance to bonds was followed by an increased cost of debt securities relative to bank loans. More importantly, they documented that, unlike corporate bonds, bank loans generally behaved in a markedly procyclical manner during the financial crisis. De Fiore and Uhlig (2015) also showed that when firms have no access to the bond market, the negative effects on investment and causes for alarm that reduce bank profitability are amplified. Thus, developing the corporate bond market is important from a macroeconomic perspective because it reduces the adverse consequences on economic activity during periods of financial distress. However, it remains largely unknown why and how corporate bond markets develop across countries.

The following study investigates how laws and legal institutions affect the development of corporate bond markets relative to that of equity markets using a sample of 42 developed and developing countries over the period 1978 to 2011. In this study, we employ several different measures as proxies for creditor and shareholder protection. We also control for other legal factors, such as country legal origins, debt contract enforcement, and bond contract covenants. Existing research indicates that these legal factors are correlated with financial system development, and this link remains robust after controlling for religious composition and other national characteristics (Beck et al., 2003). Lastly, we investigate the effects of financial crises on the relationship between law and capital market development (Allen et al., 2012).

Our initial empirical strategy is to run cross-country regressions to determine the effects of creditor and shareholder rights on the development of the corporate bond market relative to that of the equity market. We control for the macroeconomic country characteristics that are likely to affect capital market development. We also employ a natural experiment with a generalized difference-in-difference (diff-in-diff, henceforth) estimator to explore whether a country's financial reforms have had any effect on the association between law and the structural development of the capital market. This diff-in-diff strategy avoids the econometric concern that institutional factors, such as creditor or shareholder rights, are endogenous, and it presents an alternative to the instrumental variable techniques that have been criticized by Djankov et al. (2007).

Our results support the logic underlying the finance and law literature, which relate investor protection to the development and structure of financial systems. First, we find that countries with stronger creditor rights tend to have more developed corporate bond markets relative to the equity markets. Moreover, the results indicate that restrictive bond covenants, which serve as an alternative ex-post