

Contents lists available at [ScienceDirect](#)

Journal of Financial Economics

journal homepage: www.elsevier.com/locate/jfecDebt enforcement, investment, and risk taking across countries[☆]Giovanni Favara^a, Erwan Morellec^{b,f,g,*}, Enrique Schroth^c, Philip Valta^{d,e,f}^a Division of Monetary Affairs, Board of Governors of the Federal Reserve System, Washington, DC 20551, USA^b Ecole Polytechnique Fédérale de Lausanne, Extranef 210, Lausanne, Switzerland^c Finance Faculty, Cass Business School, City University London, 106 Bunhill Row, London EC1Y 8TZ, UK^d University of Bern, Engehaldenstrasse 4, Bern 3012, Switzerland^e University of Geneva, 1211 Geneva, Switzerland^f Swiss Finance Institute, Boulevard du Pont d'Arve, Geneva, Switzerland^g CEPR, London EC1V 0DX, United Kingdom

ARTICLE INFO

Article history:

Received 27 August 2015

Revised 5 February 2016

Accepted 1 March 2016

Available online xxx

JEL Classification:

G31

G32

G33

Keywords:

Debt enforcement

Default

Investment

Asset sales

Risk-taking

ABSTRACT

We argue that the prospect of an imperfect enforcement of debt contracts in default reduces shareholder–debtholder conflicts and induces leveraged firms to invest more and take on less risk as they approach financial distress. To test these predictions, we use a large panel of firms in 41 countries with heterogeneous debt enforcement characteristics. Consistent with our model, we find that the relation between debt enforcement and firms' investment and risk depends on the firm-specific probability of default. A differences-in-differences analysis of firms' investment and risk taking in response to bankruptcy reforms that make debt more renegotiable confirms the cross-country evidence.

© 2016 Elsevier B.V. All rights reserved.

[☆] We thank the referee and the editor (Toni Whited) for detailed and constructive feedback on the paper. We also thank Regis Blazy, Asaf Eisendorfer, Florian Heider, Mauricio Larraín, Steven Ongena, Clemens Otto, Andrea Polo, Alexander Wagner, and seminar participants at the Bank of Canada, Bocconi University, Boston College, EPFL, Lancaster University School of Management, Lund University, HEC Lausanne, HEC Montreal, HEC Paris, National University of Singapore, Nova School of Business and Economics, Singapore Management University, Università Cattolica del Sacro Cuore Milan, the University of Bern, the University of British Columbia, the University of Florida, the University of Hong Kong, the University of Reading, the 2014 WFA Meetings, the 2014 European Summer Symposium on Financial Markets (Gerzensee), the 2014 European Finance Association Meetings, the 2014 Skinance Conference, the 2014 Finance Down Under Conference, the 2014 Darden International Finance Conference, the 2015 FIRS Conference, and the 2015 AFFI conference. Erwan Morellec acknowledges financial support from the Swiss Fi-

1. Introduction

A central result in corporate finance is that, as firms approach financial distress, key corporate decisions such as investment and risk taking get distorted by conflicts of interests between shareholders and creditors. Notably, the expectation of a low shareholder recovery in distress may lead shareholders in financially distressed firms to reject positive net present value (NPV) projects or to sell assets in place—the underinvestment effect of Myers (1977)—and

nance Institute. The views in this paper do not reflect those of the Federal Reserve System or its Board of Governors.

* Corresponding author. Fax: +41 21 693 0110.

E-mail address: erwan.morellec@epfl.ch (E. Morellec).

<http://dx.doi.org/10.1016/j.jfineco.2016.09.002>

0304-405X/© 2016 Elsevier B.V. All rights reserved.

to take on too much risk—the risk-shifting effect of Jensen and Meckling (1976).

The goal of this paper is to examine whether the enforcement of debt contracts in default affects the underinvestment and risk-shifting distortions caused by risky debt and shareholder–debtholder conflicts. To obtain empirical predictions relating debt enforcement to investment and risk choices, we develop a simple model of endogenous investment, asset sales, and risk taking in which debt enforcement affects the payoff to shareholders in default and, hence, corporate decisions close to default. The model synthesizes the theories of underinvestment (Myers, 1977), risk-shifting (Jensen and Meckling, 1976), and debt enforcement in default (Fan and Sundaresan, 2000). In the model, a firm operates risky assets and has risky, long-term debt outstanding. Management maximizes shareholder value and can make three decisions. First, it can invest in new assets. Second, it can reduce the scale of the firm by selling part of its assets before debt maturity. Third, it can change the risk of assets in place.

Using this model, we show that bankruptcy codes that favor debt enforcement decrease shareholders' expected recovery in default and, hence, the benefits of investment to shareholders. This mechanism implies that the distortions in investment and asset sales due to risky debt increase with debt enforcement in default and leads to the prediction that the effects of the default probability on investment decisions should be higher in countries with stricter debt enforcement. Additionally, we show that the prospect of a strict enforcement of debt contracts in default increases the convexity of shareholders' claim by decreasing their expected payoff in default. This leads to the prediction that the sensitivity of risk taking to the probability of default increases in countries with stricter debt enforcement.

We test these predictions using a panel of 18,602 firms in 41 countries with heterogeneous bankruptcy procedures, exploiting the cross-country variation in debt enforcement documented in the survey by Djankov, Hart, McLiesh, and Shleifer (DHMS, 2008). This survey shows that bankruptcy procedures vary substantially across countries and that an important source of heterogeneity is the amount of provisions for debt enforcement in default. In our empirical analysis, we construct a debt enforcement index with information from the DHMS survey and use this index to measure international variation in debt enforcement and shareholders' expected recovery in default. Because distortions in corporate policies are more likely when firms approach financial distress, our tests relate investment and risk to the interaction between the index of debt enforcement and firm-specific measures of default risk.

Our empirical analysis delivers three main results. First, distressed firms in countries with strict debt enforcement invest less than equally distressed firms in countries with weaker debt enforcement procedures. Notably, firms with a default probability higher than the third quartile breakpoint in countries where debt contracts are most likely to be enforced (where the *Debt enforcement* index has the maximum value of one) have an investment-to-assets ratio that is about 14% lower than similar firms in countries where debt contracts are least likely to be enforced (where

the *Debt enforcement* index equals zero). Second, distressed firms' assets grow significantly less in countries where debt contracts are strictly enforced. On average, their asset growth rate is 79% smaller than that of distressed firms in a country with the weakest debt enforcement. Finally, distressed firms in countries where debt enforcement is strict are about 37% riskier, measured by total equity volatility, than similar firms in countries where debt enforcement is weaker.

The main challenge of our empirical analysis is that firms are not randomly assigned to different bankruptcy procedures. The utmost concern is that a country's bankruptcy procedure may be correlated with observable and unobservable country characteristics that are likely to affect firms' ability to invest or undertake risk through channels other than the enforceability of debt contracts. Our empirical framework attempts to control for such confounding effects by including time-varying firm and country characteristics, as well as country or firm fixed effects. The inclusion of country or firm fixed effects mitigates the concern that other unobserved country-specific factors may correlate with creditors' ability to enforce debt contracts. In addition, since firms close to distress are those that are most likely to be influenced by the bankruptcy procedures, our tests are conducted by exploiting firms' heterogeneity in their probability of facing financial distress.

To strengthen the interpretation of the results, we also implement a differences-in-differences analysis around two sets of bankruptcy reforms that targeted the renegotiability of debt and, therefore, debt enforcement. The goal of this analysis is to validate our cross-country results in a setting that, by design, reduces the concern that our results may be driven by potential effects of unobserved country characteristics. In a first step, we explore the effects of three major bankruptcy reforms in France, Italy, and Brazil in 2005 that made debtor-initiated renegotiations easier (see Weber, 2005; Rodano, Serrano Velarde, and Tarantino, 2016; Alencar and Ponticelli, 2016). In a second step, we focus on the 1978 U.S. Bankruptcy Reform Act, which had a major impact on distressed reorganizations under Chapter 11. This reform was designed to encourage debt renegotiation, by shifting bargaining power in reorganizations toward shareholders (see Hackbarth, Haselman, and Schoenherr, 2015). In all cases, we compare investment, asset growth, and risk of firms with a high default probability around each bankruptcy reform to firms with a low default probability. Consistent with the cross-country evidence, we find that high default probability firms invest relatively more and take on relatively less risk after the implementation of a reform than low default probability firms.

Our paper contributes to the literature on the real effects of debt enforcement. A recent strand of this literature shows that bankruptcy codes with fewer renegotiation frictions lead to larger debt reductions and reduce equity risk (see Fan and Sundaresan, 2000; François and Morellec, 2004; or Davydenko and Strebulaev, 2007). Consistent with this view, deviations from absolute priority caused by debtor-friendly bankruptcy codes have been shown to have important effects on equity returns both in the U.S. (see

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات