



ELSEVIER

Contents lists available at ScienceDirect

Journal of International Financial Markets, Institutions & Money

journal homepage: www.elsevier.com/locate/intfin



Do firm characteristics matter for the dynamics of idiosyncratic risk?



Nadia Vozlyublennaia*

Area of Finance, Rawls College of Business Administration, Texas Tech University, Lubbock, TX 79409-2101, United States

ARTICLE INFO

Article history:

Received 6 June 2013

Accepted 13 July 2013

Available online 1 August 2013

Keywords:

Idiosyncratic risk
Firm characteristics
Fundamentals

ABSTRACT

We investigate the effects of several firm characteristics utilized in the recent literature to account for puzzling dynamics of idiosyncratic risk. Our results suggest that these characteristics (book-to-market, leverage, size, institutional ownership, earnings-per-share, and turnover) are able to explain well the differences in idiosyncratic risk across securities. On the other hand, the characteristics appear to be poor predictors of the fluctuations in idiosyncratic risk of a given security over time. About 80% of the securities in our sample do not have a significant relationship between any of the considered characteristics and idiosyncratic risk at security level. These results suggest that firm characteristics can be used in the analysis of the differences in risk across securities, such as portfolio composition. However, the characteristics do not appear useful in the analysis of security risk dynamics, for example, monitoring portfolio risk over time. These conclusions are robust to alternative specifications of idiosyncratic risk, security samples, and time periods.

© 2013 Elsevier B.V. All rights reserved.

1. Introduction

Although idiosyncratic risk typically accounts for over 90% of the total security risk, in theory it can be diversified away, and therefore, has long been considered unworthy of attention. Mounting puzzling evidence in the recent literature questions this proposition. [Campbell et al. \(2001\)](#), for example,

* Tel.: +1 806 834 1038; fax: +1 806 742 3197.

E-mail address: nadia.vozlyublennaia@ttu.edu

demonstrate that the market average idiosyncratic risk was steadily increasing for about four decades.¹ The authors further propose that investors should constantly adjust their portfolios to achieve the same level of diversification, since the market average firm-specific risk is increasing. A separate strand of literature focuses on a puzzling empirical relationship between idiosyncratic risk and returns.² Although there is no definite conclusion so far on the exact nature of this relationship, the results imply that investors may be exposed to idiosyncratic risk since it demands a risk premium. Additionally, there is a direct indication of investor under-diversification (i.e., investors typically hold some idiosyncratic risk in their portfolios), as outlined in [Goetzmann and Kumar \(2001\)](#). Finally, [Merton \(1987\)](#)'s limited information hypothesis suggests that investors can be exposed to idiosyncratic risk due to the limited security information available to investors. Overall, the researchers now are more inclined to think that idiosyncratic volatility is relevant in the investment analysis.

Recognizing the importance of idiosyncratic volatility, numerous recent papers investigate its driving factors and propose certain company characteristics, which could explain the observed dynamics and cross-sectional differences in idiosyncratic risk. This literature includes, but is not limited to, [Brandt et al. \(2010\)](#), [Morck et al. \(2000\)](#), [Irvine and Pontiff \(2009\)](#), [Brown and Kapadia \(2007\)](#), and [Malkiel and Xu \(1999\)](#). [Rubin and Smith \(2011\)](#) present a comparative investigation of these studies and note that these papers often generate different results in the analysis of a cross-section of securities versus time-series of market-wide indexes. This research typically aims at explaining the unusual behavior of the market average idiosyncratic volatility and its implications to the asset pricing models.

From the practical perspective, if idiosyncratic risk of a given security can be potentially misestimated, due to the limited available information (see [Merton, 1987](#)), the company characteristics, which are related to idiosyncratic risk, may be used as supplemental information in the analysis of risk. Suppose company characteristics are good indicators of the differences in idiosyncratic risk across securities. Then the characteristics can be used to decide which securities should be included in a portfolio. If company characteristics are good predictors of the dynamics, or future changes, of idiosyncratic risk of an individual security, they can be used in monitoring/forecasting risk of an existing portfolio of securities over time. Researchers have focused so far on the theoretical implications of the cross-sectional relationship between characteristics and idiosyncratic volatility and its ability to explain the behavior of the market average idiosyncratic risk. The practical implications of these relationships, as well as the investigation of the determinants of an individual security's idiosyncratic risk have been missing. We attempt to fill in this gap in the present paper.

We investigate the performance of several main explanatory factors of idiosyncratic volatility considered in the literature, namely book-to-market, leverage, size, institutional ownership, earnings-per-share, and turnover. We perform the analysis of the relationship between these characteristics and idiosyncratic risk in the cross-section of securities, as well as in the time-series of individual securities. In this security-by-security analysis, we find that the proportion of securities, which have a significant relationship between the considered characteristics and idiosyncratic risk, is very small. Only about 20% of securities, on average, have a significant association between a given characteristic and idiosyncratic risk, and only 0.03% of securities experience a significant relationship between all the characteristics and risk. On the other hand, company characteristics can be used to identify securities with relatively high/low idiosyncratic risk. In the cross-sectional regressions, most of the characteristics appear to be highly significant. Our cross-sectional analysis further suggests that a given security is likely to have a high idiosyncratic risk if it is associated with a low company institutional ownership, low earnings-per-share, high share turnover, high leverage, and small company size.

Let us discuss in more detail the above results in relation to the findings in the relevant literature. We focus on one characteristic at a time. [Malkiel and Xu \(2003\)](#) argue that increasing institutional

¹ After 1997, however, the average idiosyncratic volatility has decreased dramatically, as demonstrated, for instance, by [Bekaert et al. \(2010\)](#) and [Brandt et al. \(2010\)](#).

² [Goyal and Santa-Clara \(2003\)](#), [Bali et al. \(2005, 2008, 2009\)](#), [Lundblad \(2007\)](#), [Ghysels et al. \(2005\)](#), [Guo and Whitelaw \(2006\)](#), and [Guo and Savickas \(2006\)](#) report a significant relationship between market average idiosyncratic risk and returns on a market index. [Ang et al. \(2006, 2009\)](#), and [Fu \(2009\)](#) demonstrate a connection between idiosyncratic risk and returns in a cross-section of securities. [Wei and Zhang \(2005\)](#), [Bali et al. \(2005\)](#), [Jiang and Lee \(2006\)](#), and [Fink et al. \(2010\)](#), on the other hand, argue that there is no significant relationship between returns and idiosyncratic risk.

Download English Version:

<https://daneshyari.com/en/article/964021>

Download Persian Version:

<https://daneshyari.com/article/964021>

[Daneshyari.com](https://daneshyari.com)