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Firm-specific risk and equity market development ☆

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Abstract

We show that the increase in firm-specific risk in the US stock market is the result of new listings by riskier companies. In addition, our results explain why prior researchers have found that growth opportunities, profit margin, firm size, and industry composition (among other factors) are related to increases in firm-specific risk. The new listing effect is not driven by small companies becoming riskier but instead by a riskier sub-sample of the economy becoming publicly traded. These results are consistent with prior research that documents time trends in financial market development.

JEL classification: G11

Keywords: Idiosyncratic risk; Firm-specific risk; Market risk

1. Introduction

Recent research shows that firm-specific risk in US equity markets has increased over the last few decades (Campbell, Lettau, Malkiel, and Xu, 2001; hereafter, CLMX). This discovery is puzzling for at least two reasons. First, the US economy has become notably more stable recently, experiencing only two mild recessions in the last 20 years. (see, e.g., McConnell and Perez-Quiros, 2000; Blanchard and Simon, 2001; Stock and Watson, 2002). Second, the volatility of broad market indices has not increased.

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Just as curious is that until recently the trend in idiosyncratic risk has gone largely unnoticed. In part, this could be because traditional asset pricing theory concludes firm-specific, as opposed to market-wide, risk can be diversified away and therefore should not be a priced risk factor. However, idiosyncratic risk is important for many reasons. First, high levels of idiosyncratic risk may be the result of low correlations between stocks and thereby increase the number of securities required to generate a well-diversified portfolio (see CLMX, pp. 23–27). Similarly, some investors cannot diversify (e.g., participants in employee stock option plans) and must bear idiosyncratic risk. Second, stock option prices depend on the total volatility of the underlying stock of which idiosyncratic volatility is the largest component. Third, a large and developing corporate risk management literature indicates that managers at non-financial corporations carefully manage firm-specific risks including their own equity price risk (see Pace, 1999). Fourth, the level of idiosyncratic risk could have important consequences for the amount of information conveyed by stock returns (see Durnev, Morck, Yeung, and Zarowin, 2003). Fifth, and perhaps most important, recent papers by Goyal and Santa-Clara (2003) and Ang, Hodrick, Xing, and Zhang (2006) show that idiosyncratic risk may be a priced risk factor (however Bali, Cakici, Yan, and Zhang, 2005, do not find a significant premium for idiosyncratic risk in an extended sample).

Following the findings of CLMX, several papers have investigated the determinants of increasing firm-specific risk. Each of these studies finds some specific factor(s) associated with the increase in firm-specific risk. Together, they show that the trend in idiosyncratic risk is associated with trends toward lower and more volatile profit margins, smaller size, lower dividends, higher growth rates, and the rise of riskier industries (specific results of these studies are summarized in the Section 2.1). In this paper we propose a simple and unifying explanation for the increase in firm-specific risk: Increasingly risky firms have listed publicly, thus the overall composition of publicly traded firms has changed significantly over the last 40 years. In most of our tests, this new listing effect explains the vast majority of the increase in idiosyncratic risk. It also explains many of the results shown by other researchers investigating this issue (as well as some related issues). In general, we show that the new listing effect is both necessary and sufficient for explaining the trend in idiosyncratic risk. It is sufficient in so far as there is generally no significant trend in idiosyncratic risk after accounting for the year a firm lists.[1] It is necessary in that the year a firm lists provides additional explanatory power beyond the variables examined in other studies.

We stress that our results are not related directly to firm age. In particular, our primary finding is not that newly listed firms in general have higher idiosyncratic risk which decays as the firm matures (suggesting that an increasing proportion of newly listed firms could lead to an upward trend in idiosyncratic risk). Instead, we find that firms with increasingly and persistently higher idiosyncratic risk have been listing over the last 40 years, suggesting a fundamental change in the character of a typical publicly traded firm.[2]

[1]For example, simply accounting for the decade in which firms became publicly listed causes the annual trend in our measure of idiosyncratic risk to decrease from a statistically significant 1.11% to a statistically insignificant −0.06%.

[2]This contrasts with the findings of Fink, Fink, Grullon, and Weston (2005) who claim that the increase in idiosyncratic risk is caused by firms listing earlier in their life cycle. We directly compare the results of our analysis to those of Fink, Fink, Grullon, and Weston (2005) in Section 6.