The credit risk–return puzzle: Impact of credit rating announcements in Australia and Japan

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A R T I C L E   I N F O

A B S T R A C T

Traditional asset pricing models postulate that high risk investments are usually associated with higher returns. However, this does not hold in the relationship between credit risk and return. There is a known credit risk–return puzzle, which highlights a negative relationship between credit risk and the stock market returns. The objective of this study is to assess the puzzling credit risk–return relationship of stocks; in particular, comparing the stock returns of high versus low credit risk firms, as measured by credit ratings from Standard and Poor's in Australia and Japan for a period from January 1990 to June 2012. Our results indicate that the credit risk–return puzzle exists in both Japan and Australia. However, it seems that the credit risk–return anomaly is explained by the downgrade announcements in the market and hence we conclude that downgrade announcements of a firm have a significant impact on the cross section of returns.

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1. Introduction

If credit risk is systematic, one would expect a positive association between credit risk and realised return. However, there is a known puzzle in the credit risk–return relationship in that there is a negative relationship between credit risk and stock market returns. Hence the literature suggests that firms with high credit risk tend to have a lower return than firms with lower credit risk. Analysing the credit risk–return puzzle, recent research by Campbell et al. (2008) shows evidence that the "distress effect" is stronger amongst small, illiquid stocks. Moreover, Dichev and Piotroski (2001) show that low credit quality firms perform poorly after downgrades, which they attribute to market underreaction. The relationship between credit rating and return has been analysed by Avramov et al. (2009). However, it should be highlighted that most of the studies analysing

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this puzzle have been US centred. The key aim of this study is to provide evidence on this question by investigating the empirical relation between credit risk and systematic risk by undertaking an analysis in Australia and Japan. We measure credit risk by using the long term foreign currency credit ratings provided by Standard and Poor's.

The rationale behind this study is, if we expect financial markets to be integrated the credit risk–return puzzle should hold in the developed markets. With the move toward a more financially integrated market, through stronger trade and financial linkages across countries, we would expect greater business cycle synchronization. The huge spillover effect following the global financial crisis (GFC) further highlights that world markets are highly integrated. In their paper, Avramov et al. (2009) highlight that the premium between high and low rated stocks persists even after returns are calculated using alternative pricing models, namely, the capital asset pricing model (CAPM) or Fama and French (1992, 1993) in the US stock market, at the firm level. Hence, the key research question that we consider in this paper is that if financial markets are strongly related, this relationship should hold in other markets, in particular for other developed nations. In fact, the global financial crisis has revived the discussion on the financial markets integration. For instance, the emerging markets appear to have decoupled from developed nations for part of the GFC period, see for example Dolley and Hutchison (2009). In simple terms, the argument is that emerging markets have achieved stronger economic growth and hence emerging markets have decoupled from advanced economies. In 2007, the decoupling hypothesis held that Latin American and Asian economies, especially emerging ones, had broadened and deepened to the point that they no longer depend on the United States economy for growth, leaving them insulated from a slowdown there, even during the GFC. The beliefs in the financial markets were that these countries have generated strong outperformance for stocks outside the United States. Further, Avramov et al. (2012) study why global asset pricing models have failed to capture the cross section of country equity returns. They indicate that the equities of countries in the high credit risk group, which are the emerging markets, outperform the equities of countries in the low credit risk group, which are the developed nations. Hence, this suggests that at the sovereign level, we do not have a credit risk–return puzzle, in contrast to the results at the individual firm level for the US market. Hence this brings us to our first key research contribution of this study. Avramov et al. (2009) assess the credit risk–return puzzle in the US market and establish that low credit risk firms realize higher returns than high credit risk firms and conclude that this is puzzling "as investors seem to pay a premium for bearing credit risk". Our contribution is different in that we analyse the credit risk–return puzzle using two developed markets which have different characteristics than the US market, namely, Japan in Asia and Australia in the Pacific region, both being the largest markets in the respective regions. The rationale for choosing Australia is that amongst the developed markets of the world, Australia's experience in the global financial crisis has been different. Ali and Daly (2010) investigate the macroeconomic determinants of aggregate credit risk and the implication for capital requirements by focusing on the Australian and the US market. They conclude that Australia has been relatively immune to the recent crisis and that the US markets is more susceptible to adverse macroeconomic shocks. Further, Brown and Davis (2010) analyse Australia's experience in the global financial crisis and conclude that of developed economies around the world, Australia has emerged as amongst the least affected by the Global Financial Crisis. As such, extending the work of Avramov et al. (2009), we consider Australia to test if the credit risk–return puzzle holds in developed markets other than the US. The next country included in our analysis is Japan. We consider Japan given that Japan is a bank based system in contrast to the US market, which is a market based system. One of the key features of the Japanese market is that banks have played an essential role in the financial system and have been the most dominant source of funding for businesses; see for example, Hoshi and Kashyap (2001). The debate on bank-based and market based system dates long back in the literature, for example, Boyd and Smith (1998), Rajan and Zingales (1998) and Levine (2002) amongst others. As such our contribution will be to assess if the credit risk–return puzzle holds in a bank based system like Japan.

We use a panel regression approach for our modelling framework. We model the credit risk–return by considering different states of the economy. Goldstein (2012) argues that the credit spread puzzle can be addressed by taking account of such factors as the variability of the level of risk premium and the likelihood of default over the course of the economic cycle. He argues that if default models incorporate economic states, like recessions, where defaults are more likely to happen, this can resolve the credit spread puzzle. Hence, we further differentiate our study from Avramov et al. (2009) and contribute to the literature by assessing whether the credit risk–return puzzle varies over different states of the economy as classified by a high,