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Are credit ratings procyclical?

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Abstract

This paper studies the influence of the state of the business cycle on credit ratings. In particular, we assess whether rating agencies are excessively procyclical in their assignment of ratings. Our analysis is based on a model of ratings determination that takes into account factors that measure the business and financial risks of firms, in addition to indicators of macroeconomic conditions. Utilizing annual data on all US firms rated by Standard & Poor's, we find that ratings do not generally exhibit excess sensitivity to the business cycle. In addition, we document that previously reported findings of a secular tightening of ratings standards are not robust to a more complete accounting of systematic changes to measures of risk.

JEL classification: G20; G28; G32

Keywords: Rating agencies; Business cycles; Credit risk

> The ideal is to rate 'through the cycle'. There is no point in assigning high ratings to a company enjoying peak prosperity if that performance level is expected to be only temporary. Similarly, there is no need to lower ratings to reflect poor performance as long as one can reliably anticipate that better times are just around the corner.
>
> Standard & Poor's (2002, p. 41)

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1. Introduction

Credit risk measurement has played an increasingly important role in the pricing of credit-risky instruments, asset allocation decisions and the development of integrated risk management systems (see, e.g., Duffie and Singleton, 2003). One important challenge in measuring credit risk is the identification of systematic risk exposures over the business cycle. In particular, there are several situations in which it may be desirable to have measures of credit risk that are unaffected by cyclical fluctuations (e.g. long-horizon investment strategies, capital allocation). Credit ratings can play a key role in this case. As is evident in the above quotation, one of the main goals of rating agencies is to assign ratings that are insensitive to undue cyclical influences.

Historically, credit ratings were designed for the benefit of long-term buy-and-hold investors, who arguably were less concerned with credit events that affect a bond's market value in the short run but do not fundamentally affect the likelihood that the bond will be repaid in full at maturity. Thus, rating "through the cycle" became rating agencies' way of measuring risk that was immune to short-run variation in economic conditions. The longevity and success of agencies such as Standard and Poor's and Moody's suggest that the production of such risk measures has been highly valued by investors.

But what do rating agencies mean when they claim that they rate "through the cycle"? One interpretation, which we adopt here, is that a firm's rating should be independent of the state of the business cycle, conditional on its underlying financial and business characteristics. We examine whether ratings are *excessively procyclical* by empirically testing whether the state of the US economy is an important determinant of firm credit ratings after proper account is taken of firm-specific factors. [1] More specifically, our null hypothesis is that business cycle variables should not have a marginal effect on the rating assigned to a firm.

Even if rating agencies see through the cycle in making their assignments, it is nonetheless plausible that ratings will exhibit some degree of comovement with measures of aggregate economic activity. For instance, to the extent that changes in the financial and business prospects of firms are driven by long-lived fundamental shocks, and these shocks also induce business cycle fluctuations, we would expect to see the long-term creditworthiness of firms, and hence credit ratings, to covary positively with the cycle (see Löffler, 2003).

The difficulty in assessing whether ratings are excessively procyclical is in determining what is an appropriate degree of comovement between ratings and the cycle. In the context of our analysis, this issue is embodied in the choice of variables we use to capture the true long-term credit risk of firms. For this, we turn to the rating agencies themselves to tell us which factors they consider to be most important. The implicit assumption is that the rating agencies are best suited to have determined the most relevant factors that correlate with credit risk. Of course, we may fail to

[1] We will drop the modifier excessive and simply use the term procyclical when the context is clear.