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The impact of working capital management on firm profitability in different business cycles: Evidence from Finland

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ABSTRACT

The recent economic downturn of 2007–2008 has brought renewed focus on working capital policies. In this paper we examine the role of business cycles on the working capital–profitability relationship using a sample of Finnish listed companies over an 18-year period. We find the impact of business cycle on the working capital–profitability relationship is more pronounced in economic downturns relative to economic booms. We further show that the significance of efficient inventory management and accounts receivables conversion periods increase during periods of economic downturns. Our results demonstrate that active working capital management matters and, thus, should be included in firms' financial planning.

1. Introduction

This paper investigates the effect of the business cycle on the link between working capital, the difference between current assets and current liabilities, and corporate performance. Efficient working

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capital management is recognized as an important aspect of financial management practices in all organizational forms. In acknowledgement of this importance, the *CFO Magazine* publishes an annual study of corporate working capital management performance in many countries. The extensive literature indicates that it impacts directly on corporate liquidity (Kim et al., 1998; Opler et al., 1999), profitability (e.g., Shin and Soenen, 1998; Deloof, 2003; Lazaridis and Tryfonidis, 2006; Ukaegbu, 2014), and solvency (e.g., Berryman, 1983; Peel and Wilson, 1994).

It is reasonable to assume that economy-wide fluctuations exogenous to the operations of the firm play an important role in the demand for firms' products and any financing decision. Korajczyk and Levy (2003), for instance, suggest that firms time debt issuance based on economic conditions. Also, given that retained earnings are a significant component of working capital, business cycles can be said to affect all enterprises financing source through its effect on economic growth and sales. For example, when company sales weaken it engenders earning declines, thereby, affecting an important source of working capital. The recent global economic downturn with crimping consumer demand is an excellent example of this. The crisis, characterized by plummeting sales, put a squeeze on corporate revenues and profit margins, and subsequently, working capital requirements. This has brought renewed focus on working capital management at companies all over the world.

The literature on working capital, however, only includes a handful of studies examining the impact of the business cycle on working capital. An early study by Merville and Tavis (1973) examined the relationship between firm working capital policies and business cycle. More recent studies have investigated the degree to which firms' reliance on bank borrowing to finance working capital is cyclical (Einarsson and Marquis, 2001), the significance of firms' external dependence for financing needs on the link between industry growth and business the cycle in the short term (Braun and Larrain, 2005), and the influence of business indicators on the determinants of working capital management (Chiou et al., 2006). These studies have independently linked working capital to corporate profitability and the business cycle. No study, to the best of our knowledge, has examined the simultaneous working capital–profitability and business cycle effects. There is therefore a substantial gap in the literature which this paper seeks to fill. Firms may have an optimal level of working capital that maximizes their value. However, optimal levels may change to reflect business conditions. Consequently, we contribute to the literature by re-examining the relationship between working capital management and corporate profitability by investigating the role business cycle plays in this relationship.

We investigate this important relationship using a sample of firms listed on the Helsinki Stock Exchange and an extended study period of 18 years, between 1990 and 2008. Finnish firms tend to react strongly to changes in the business cycle, a characteristic that can be observed from the volatility of the Nasdaq OMX Helsinki stock index. The index usually declines quickly in poor economic states, but also makes fast recoveries. Finland, therefore, presents an excellent representative example of how the working capital–profitability relationship may change in different economic states. The choice of Finland is also significant as it also offers a representative Nordic perspective of this important working capital–profitability relationship. Hitherto no academic study has examined the working capital–profitability relationship in the Nordic region, to the best of our knowledge. Surveys on working capital management in the Nordic region carried out by Danske Bank and Ernst & Young in 2009 show, however, that many companies rated their working capital management performance as average, with a growing focus on optimizing working capital in the future. The surveys are, however, silent on how this average performance affected profitability. This gives further impetus for our study.

Our results point to a number of interesting findings. First, we find that firms can enhance their profitability by increasing working capital efficiency. This is a significant result because many Nordic firms find it hard to turn good policy intentions on working capital management into reality (Ernst and Young, 2009). Economically, firms may gain by paying increasing attention to efficient working capital practices. Our empirical finding, therefore, should motivate firms to implement new work processes as a matter of necessity. We also found that working capital management is relatively more important in low economic states than in the economic boom state, implying working capital management should be included in firms' financial planning. This finding corroborates evidence from the survey results in the Nordic region. Specifically, the survey results by Ernst and Young (2009) indicate that