Does macro-economy have any effect on firm investment-cash flow sensitivities? —An empirical study based on panel data, 1993–2004

Abstract  We conduct an empirical study on Chinese listed firms’ investment-cash flow sensitivities in different stages of the macroeconomic cycle during 1993–2004, and find that macro-economy has a significant effect on investment-cash flow sensitivities. When economic slowdown occurred between 1998 and 2001, sample firms reduced working capital substantially to maintain some necessary investment level of fixed assets, that is, firms stabilized fixed assets investment by adjusting working capital. However, the sensitivity coefficients of fixed assets investment to cash or sales revenue were not systematically higher in the depressed stage than in the booming stage.

Keywords  macro-economy, investment-cash flow sensitivities, panel data

JEL Classification  E22

Received February 15, 2007

YING Weiwei (yingweiwei@263.net)
School of International Business, Beijing Foreign Studies University, Beijing 100089, China
E-mail: yingweiwei@263.net
1 Introduction

In a perfect capital market, outside investors share the same information with firms, which is called information symmetry. Firms can obtain external financing in the market for projects of fixed assets investment with the net present value (NPV) above zero. In other words, internal capital and external capital are perfect substitutes. However, in an imperfect market where information is asymmetric, firms cannot obtain enough external financing to put into operation some projects of investment, even though NPVs are above zero. This circumstance is called financing constraints, where internal capital and external capital cannot substitute each other completely. The greater the financing constraints are, the more dependent the firms are on internal capital. In the context of China’s imperfect capital market, it is theoretically valid to analyze firms’ financing constraints through the study of firms’ fixed assets investment to internal cash flow sensitivities. Here the internal cash flow includes cash stock, cash flow, sales revenue and working capital, etc. The term of investment-cash flow sensitivities is used for short.

The investment-cash flow sensitivity is of great importance in analyzing firms’ investment decision-making procedures and their influencing factors. Since firm investment fluctuation is one of the key indicators of macroeconomic conditions, we can analyze whether or not macro-economy has any effect on investment-cash flow sensitivities through the study of various stages of the macroeconomic cycle.

Macro-economy obviously has a significant effect on firm investment-cash flow sensitivities for the following reasons.

First, the macroeconomic cycle greatly impacts firms’ business environment. Both theoretical research and economic development practice indicate that macro-economy presents cyclical movements. In economic booms, most firms have great increases in sales and face a promising future, which stimulates more investments. While in economic slowdown, with sharp decreases in sales and a down turning future, most firms show much less interest in investments.

Second, economic policies from the government in different stages of the macroeconomic cycle greatly impact firms’ financing environment. In booming stages, the government usually takes neutral or constrictive fiscal policies and cuts down its budget deficit, which helps restrain credit expansion and raise interest rates. While in depressed stages, the government tends to take expansionary fiscal and monetary policies to increase its budget deficit and money supply, which helps lower interest rates. Thus government policies have a great influence on firms’ financing costs and availability.

Of course, in another perspective, firm investment fluctuation is an important driving factor for the fluctuations in macro-economy. Firms’ fixed assets