ELSEVIER

Review of Financial Economics 15 (2006) 251–269

RFE
Review of Financial Economics

www.elsevier.com/locate/econbase

Determinants of stock option use by Japanese companies

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Received 7 November 2003; received in revised form 4 January 2005; accepted 1 August 2005
Available online 27 September 2005

Abstract

Japanese data show a negative relation between leverage and the probability of firms' use of stock options. Such a relation is more marked for firms affiliated with specific keiretsu or main banks. This evidence reflects the fact that Japanese companies are more reliant on debt financing and that the agency cost of debt is a central issue in corporate governance. Results show that the frequency of the firms' use of stock options is positively associated with firm size. Finally, independent firms, which reveal more concern about shareholder wealth, are more likely to use stock options.

JEL classification: G30; J33
Keywords: Corporate governance; Stock option; Agency cost; Keiretsu; Main bank

1. Introduction

Before the late 1990s, the managerial compensation structure of Japanese companies differed somewhat from those of U.S. firms. Many U.S. companies award equity-based compensations such as stock options to their executive officers along with cash compensation. In marked contrast, until 1997, Japanese Commercial Law prohibited firms from granting stock options. Though most Japanese managers own stocks in the firms they manage, they had been compensated up to 1997 mainly by cash salaries and bonuses. Investigating Japanese directors' compensation in the early 1980s, Kaplan (1994)

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1058-3300/$ - see front matter
doi:10.1016/j.rfe.2005.08.001

found that Japanese corporations' compensation structures provide managers weaker incentives to maximize share price than that of a typical U.S. firm.

Since the 1997 revision of the Japanese Commercial Law, allowing companies to grant stock options, however, the Japanese managerial compensation structure has changed. According to Daiwa Securities SMBC Co. Ltd., 1391 firms (approximately 38% of all listed companies) adopted stock options as of March 2005. This fact suggests that equity-based compensation is becoming more widely used in Japan.

This study is intended to explore the factors that induce Japanese companies to adopt stock options. Few empirical studies on stock option use by Japanese companies exist, but many studies exist for U.S. companies (e.g., Baber, Janakiraman, & Kang, 1996; Bryant, Hwang, & Lilien, 2000; Gaver & Gaver, 1993; Lewellen, Loderer, & Martin, 1987; Matsunaga, 1995; Mehran, 1995; Ryan & Wiggins, 2001; Smith & Watts, 1992; Yermack, 1995). Given that the Japanese style of corporate governance differs somewhat from those of typical U.S. companies, the use of Japanese data allows testing of the universality of the hypotheses presented in previous studies of U.S. companies. Keiretsu affiliations and main bank relationships have served a central role in Japanese corporate governance (Aoki, Patrick, & Sheard, 1994; Prowse, 1992). The use of Japanese data allows analysis of stock option usage in a country where different governance mechanisms pertain. Moreover, using Japanese data allows investigation of an interesting topic: the relation between the unique governance mechanisms, keiretsu affiliations and main bank relationships, and the likelihood that a firm grants stock options.

We can obtain information indicating whether or not each company adopts stock options from its annual report. This study uses annual reports of fiscal year 2000 to identify whether or not stock options were adopted by firms listed on the first section of the Tokyo Stock Exchange (TSE). Analyses herein used a dummy variable which takes a value of one if a firm received approval to award stock options at least once during 1997–2000 and zero otherwise (stock option dummy). For exploring the determinants of stock option usage, probit regression analyses are conducted using the stock option dummy as a dependent variable.

The main results of this paper are the following. First, leverage is negatively related to the likelihood that a firm adopts stock options. This evidence, not commonly found in previous U.S. studies, might reflect the fact that Japanese companies have relied more on debt financing. Consequently, the agency cost of debt might be a central issue in corporate governance. This interpretation would be reinforced by the finding that the negative relation between leverage and the probability of a firm's use of stock options is more definite for firms that are affiliated with specific keiretsu or main banks.

Second, firm size is positively associated with the probability of a firm's adopting stock options. Such a relation is detected also in earlier U.S. studies. Therefore, we can conclude that firm size is a common determinant to adopt stock options for both U.S. and Japanese firms. A plausible interpretation of this evidence would be that a manager of a large firm must allocate more complex assets: it becomes more difficult for shareholders to monitor that allocation. However, the fact that stock options have just recently come to be used in Japan allows another interpretation: larger firms have superior abilities to introduce new governance devices early because they usually have a capable staff specializing in law, accounting, taxation, and so on.

Finally, independent firms are more likely to adopt stock options. Apparently, independent firms must be relatively concerned about shareholder wealth because they are not encumbered by cross-