Journal of Financial Stability 25 (2016) 37–46

Contents lists available at ScienceDirect

Journal of Financial Stability

journal homepage: www.elsevier.com/locate/jfstabil

Bank regulation, financial crisis, and the announcement effects of seasoned equity offerings of US commercial banks

Hui Li [a], Hong Liu [b,*], Antonios Siganos [b], Mingming Zhou [c,1]

[a] School of Economics and Business, Loughborough University, Loughborough, UK
[b] Adam Smith Business School, University of Glasgow, Main Building, Glasgow, G12 8QQ, UK
[c] College of Business, University of Colorado at Colorado Springs, USA

ARTICLE INFO

Article history:
Received 24 November 2015
Received in revised form 19 March 2016
Accepted 16 June 2016
Available online 23 June 2016

JEL classification:
G01
G21
G14
G32

Keywords:
Seasoned equity offerings (SEOs)
Announcement stock returns
Banks
Bank regulation
Financial crisis

ABSTRACT

This paper studies the differences in the announcement effects of seasoned equity offerings (SEOs) of commercial banks and non-banks, and explores the influence of bank regulation and the financial crisis on such differences. We find that abnormal stock returns on SEO announcements for US commercial banks are significantly higher than those of non-banks, consistent with the hypothesis that bank regulations reduce the likelihood that bank SEOs signal overpriced equity. The propensity score matching-based difference-in-difference analysis indicates that the differences in stock returns between banks and non-banks decreased during the 2007–2009 financial crisis period and increased after the passage of the Dodd-Frank Act in 2010.

1. Introduction

The 2007–2009 global financial crisis triggered extensive debate over the role of bank capital in preventing failure. Recent studies on bank capital adequacy find that capital has a significant impact on banks' systemic risk and banks' performance during financial crises (e.g., Gauthier et al., 2012; Acharya et al., 2012; Mehran and Thakor, 2011; Berger and Bouwman, 2013; Black and Hazelwood, 2013; Bessler and Kurmann, 2014). Seasoned equity offerings (SEOs) by banks are generally encouraged by regulators because they believe a higher level of capital for individual banks can help sustain a healthy financial system. The issuance of new equity by banks, however, gives mixed signals to market participants. New equity issuance may demonstrate a bank's commitment and willingness to comply with capital regulation and bank stability (Keeley, 1989), but it may also signal private information that a bank raises new equity capital in response to financial difficulties (Krishnan et al., 2010).

A large number of studies explore the announcement effects of SEOs by non-banks and find that SEO announcements are related with negative abnormal stock returns (e.g., Smith, 1986; Mikkelson and Partch, 1986; Barclay and Litzenberger, 1988; Hansen, 1989; Eckbo and Masulis, 1992; Corwin, 2003).[2] This pattern is consistent with the signaling model of Myers and Majluf (1984) that an SEO announcement signals firm overvaluation. However, for banks, the information content of SEO announcements might not be straightforward given the banks' compliance of banking regulations. By examining the difference in the announcement effects between commercial banks' (banks hereafter) and non-banks' SEOs, we intend to discover the different nature of information content in the SEO announcement for banks from non-banks, and in particular, the implications of banking regulations in the event of bank SEOs. We extend our analysis by investigating how the 2007–2009

* Corresponding author.
E-mail addresses: H.Li@lboro.ac.uk (H. Li), Hong.Liu@glasgow.ac.uk (H. Liu), Antonios.Siganos@glasgow.ac.uk (A. Siganos), mzhou@uccs.edu (M. Zhou).

[1] The authors would like to thank the editor Iftekhar Hasan and two anonymous referees, Chris Veld, Marie Dutordoir for helpful comments and suggestions.

[2] Veld et al. (2015) review and undertake meta-analysis on research studying the wealth effect on SEO announcements.

http://dx.doi.org/10.1016/j.jfs.2016.06.007
1572-3089/

global financial crisis and the passage of the Dodd-Frank Wall Street Reform and Consumer Protection Act in 2010 may have influenced this difference.[3]

There are competing and even contradictory hypotheses regarding the difference in SEO announcements between banks and non-banks. On one hand, abnormal stock returns following bank SEO announcements are expected to be higher than those of non-banks. Keeley (1989), for example, argues that bank regulation reduces the information content that otherwise would be revealed by a security issuance (in general negative), and consequently stock announcement effects might be less negative for bank SEOs than those of non-banks. Regulation also limits the freedom and flexibility of bank managers to set the quantity and type of capital, and to time security offerings to take advantage of differential information between managers and stock market participants.[4] Bank SEOs are therefore less likely to be considered overvalued by stock market participants than non-bank SEOs due to the lower information asymmetry between bank managers and investors.

In addition, investors might react more positively (i.e., less negatively) to bank SEOs relative to non-bank SEOs because higher capital ratio can reduce bank risk given the regulation constraints faced by banks. Polonchek et al. (1989) suggest that, unlike non-banks, banks are monitored by both the market and a regulator, and bank capital structure decisions are constrained by regulation. Regulators impose minimum capital ratios and restrictions on the type of securities that qualify for inclusion in these ratios. The capital requirement forces banks to have more of their own capital at risk; they thus have less incentive to invest in high-return but high-risk projects (Hellmann et al., 2001). Furlong and Keeley (1989) analyse the theoretical relation between capital regulation and bank asset risk and find that a higher bank capital ratio does not lead value-maximising banks to increase asset risk because more stringent capital requirements reduce a bank's gains from increasing the risk level of its asset portfolio. Assuming that overall capital regulation tends to reduce bank risk, investors are thus more inclined to build up confidence of bank SEOs than non-bank SEOs.

Finally, banks are perceived to benefit from the government's implicit too-big-to-fail (TBTF) policy. In principle, the government can always close a failing bank as soon as the bank becomes insolvent. In practice, however, the number of options available to regulators for handling bank insolvency problems decreases with the severity of the problem (e.g., Hoggarth et al., 2004; Barth et al., 2006; Kaufman, 2015). García-Palacios et al. (2014) also argue that in front of an imminent crisis, the promise of no interventions made by governments is barely credible. Recent empirical evidence shows that potential government implicit guarantee for banks has extensive implications on the market participants' perceptions. For example, it may lead to lower banks' cost of funding on expected government support (Antzoulatos and Tsoumas, 2014), positive stock market reactions upon the announcement of TARP injections (Elyasiani et al., 2014), and higher likelihood of having SEOs after receiving Capital Purchase program (CPP) funds (Khan and Vyas, 2015). With the perception that banks are less likely to fail under the TBTF policy compared to non-banks, the market will be less sensitive to information revealed from SEO announcements, and hence the market reaction to the announcement of SEOs by banks than non-banks with the same characteristics is expected less severe.

On the other hand, there is a contrasting hypothesis suggesting that abnormal stock returns of bank SEO announcements may be lower than those of non-banks. Existing theories suggest that banks may be more opaque than non-banks because of the complex financial intermediation and the nature of the underlying assets (Haggard and Howe, 2012; Jones et al., 2012).[5] The higher level of opacity may create difficulty in accurately evaluating bank SEOs (Krishnan et al., 2010), leading to a higher perception of overvaluation upon bank SEO announcements, and thus lower abnormal stock returns than for non-banks.[6] Keeley (1989) also argues that an increase in equity reduces the option value of the deposit insurance guarantee because banks become less risky, and hence banks' SEO announcements may lead to a larger negative effect.

To test the validity of the competing hypotheses, we examine 375 SEO announcements of US banks and compare their cumulative announcement stock returns (CAR) to those of their non-bank counterparts from 1982 to 2012. Our main result supports the hypothesis that the announcement effect of banks is less negative than that of non-banks. The cumulative abnormal stock returns around the announcement window $(-1, 1)$ for banks are -0.96 percent, 0.61 percent higher than that of non-banks. These results hold even after controlling for various firm-, issue- and market-specific variables. We further address the endogeneity concerns in the OLS regressions by adopting the propensity score matching (PSM) method to find the matched sample of non-banks for each bank and our PSM results confirm our main finding that the announcement effect is significantly higher for bank SEOs than non-bank SEOs.

We further explore whether the difference in stock returns between banks and non-banks was influenced by the 2007–2009 global financial crisis and the passage of the Dodd-Frank Wall Street Reform and Consumer Protection Act in 2010. Because banks were at the center of the financial crisis, the announcement of SEOs at this time may have revealed significant negative information to the market. The difference in announcement effects between bank and non-bank SEOs may thus be reduced during the financial crisis period. On the other hand, the increased capital regulation and information disclosure requirements for banks after the passage of the Dodd-Frank Act in 2010 may have led to a decreased level of adverse selection costs and thus a positive impact on the announcement effects for bank SEOs. The difference in announcement effects between bank and non-bank SEOs is therefore expected to have increased after the passage of the Dodd-Frank Act. We provide propensity score matching-based pairwise difference-in-difference analysis to examine these two hypotheses. Our results confirm our expectations, showing that the difference in the announcement effects between banks and non-banks indeed decreased during the 2007–2009 financial crisis period, but increased after the passage of the Dodd-Frank Act.

Our study contributes to the literature in several ways. We first contribute to the debate whether bank regulation could boost

[3] A number of studies have shown that non-bank firms tend to perform poorly in the long term after firms' SEO announcements. For example, Loughran and Ritter (1995) and Spiess and Affleck-Graves (1995) report that compared to non-equity issuers, equity issuers have lower profitability and, on average, have 7% lower returns annually, for the five years following each SEOs. Our study instead focuses on firms' wealth announcement effect at SEOs due to the problems highlighted with the estimation of long-term abnormal stock returns in the field. On the other hand, studying the long-term returns of bank SEOs versus non-bank SEOs could be an interesting topic for another research paper. This topic could be challenging too, as previous studies (e.g., Fama (1998)) report that long-term abnormal stock returns are highly sensitive to the expected stock return estimation model used. In addition, Brav et al. (2000) show that firms' long term abnormal stock returns after equity issuance are driven by small firms. Therefore, comparisons of long term stock returns between banks and non-banks could potentially provide new and interesting contribution to the existing research, though it is beyond the scope of our study.

[4] Booth et al. (2002) also find that regulations reduce the impact of managerial decisions on shareholder wealth, and hence help to address the agency conflicts.

[5] The empirical evidence of financial opacity compared to that of non-banks, however, is mixed, and there is no consensus among researchers (e.g., Morgan, 2002; Iannotta, 2006; Flannery et al., 2013; Dewally and Shao, 2013).

[6] Nier (2005) also finds that bank transparency reduces the chance of severe banking problems and enhances overall financial stability.