

How do central bank lending operations interact with equity offering announcements?*



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We study the influence of central bank lending operations on the announcement effects of European banks' seasoned equity offerings (SEOs). Larger participation in lending operations is associated with more negative cumulative abnormal returns following the announcement of an offering. This result supports the hypothesis that banks' reliance on central bank operations exacerbates the negative signaling effects of SEOs. However, these effects are short-lived and fade after two trading days following the SEO announcement. Further, we find that offerings motivated by capital strengthening and banks with a higher leverage ratio are more likely to signal overpriced equity.

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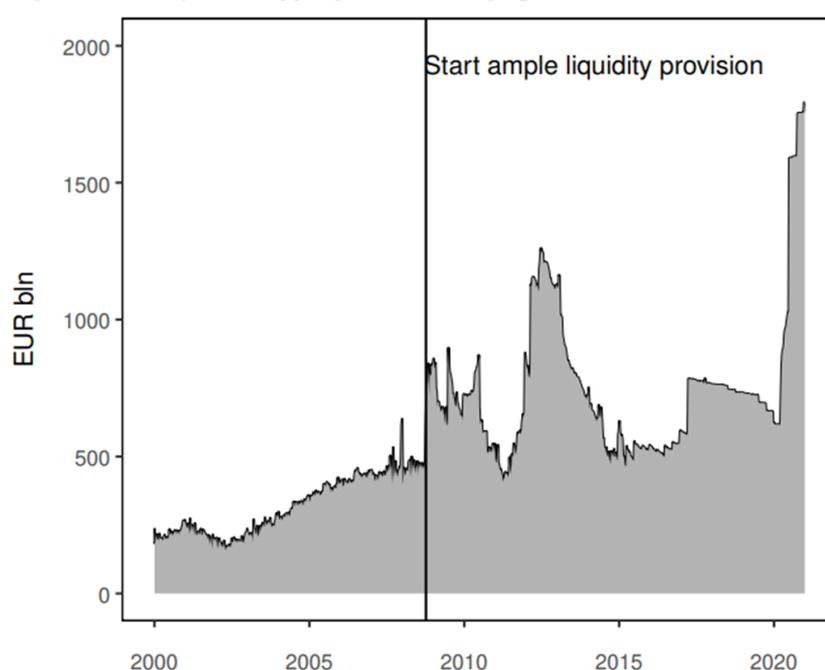
Introduction

When firms announce their intention to raise equity through a seasoned equity offering (SEO), their stock tends to underperform relative to the market following this announcement. Many empirical studies (e.g., Veld et al., 2020) have established this negative signal of SEO announcements. This negative reaction is attributed to the information asymmetry between a firm's management and outside investors (Ross, 1977; Myers & Majluf, 1984). The firm's managers are incentivized to raise equity when the stock price is overvalued, which outside investors perceive as a negative signal leading to a downward price adjustment. For banks, however, the negative signal of a SEO may be less pronounced than for non-financial firms. This difference between banks and non-financial firms is because banks' decisions to raise equity are partly driven by regulatory requirements rather than just the bank's preferences. Previous studies have found that banks' offering announcements are indeed followed by smaller price corrections relative to non-banks and that regulatory factors play a role (e.g. Polonchek et al., 1989; Cornett & Tehranian, 1994; Liu, 2016).

In our study, we consider another factor that makes banks different from non-financial firms and has grown in importance over the last decade: access to the central bank's monetary operations. Specifically, we focus on central bank lending operations, which have recorded a large increase. These lending operations enhance banks' solvency and liquidity positions and may offer an attractive source of funding¹. Both liquidity and solvency constraints are important drivers of banks' decision to raise equity (DeAngelo et.al., 2010). By easing these constraints, central bank lending operations provide a bank's management more discretion to decide when and how they would like to raise equity. Moreover, lending operations can improve market and macroeconomic conditions and create opportunities for market timing behavior (Baker & Wurgler, 2002). All else equal, the increased management discretion on the timing of the offering will likely interact with the SEO announcement and strengthen its negative signaling effect.

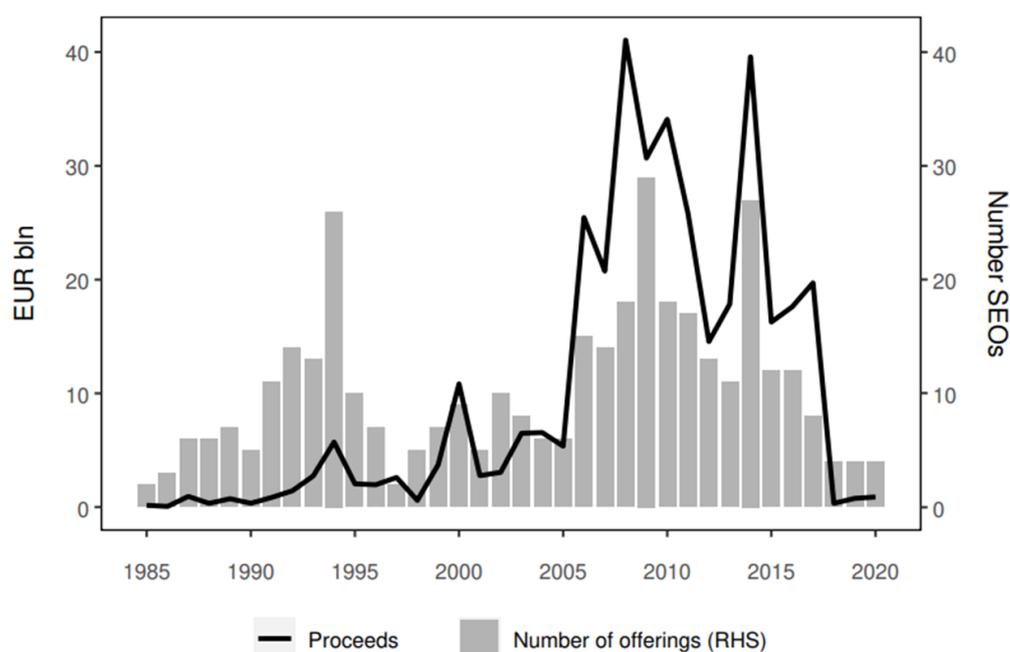
Our analysis focuses on banks in the euro area, where the Eurosystem's lending operations have increased rapidly since the Global Financial Crisis (Figure 1). We use information on 450 SEOs made by listed euro area banks. A large proportion, in terms of frequency and capital raised, took place during the Global Financial Crisis and the subsequent European debt crisis (Figure 2).

Figure 1: Eurosystem aggregated lending operations



Source: ECB

¹ See Acharya et al. (2019), Brunnermeier & Sannikov (2016), Carpinelli & Crosignani (2021), and Flanagan (2019).

Figure 2: Number of seasoned equity offerings and proceeds

Source: Giuliadori et al. (2022)

Methodology

We follow a two-stage approach to investigate how lending operations interact with the signal of banks' SEO announcements. First, we carry out an event study to estimate for each offering the cumulative abnormal returns (CARs) of equity prices following the announcement. We calculate abnormal returns using a benchmark based on a market model. Second, we perform cross-sectional regressions explaining these CARs by banks' participation in lending operations. Our main explanatory variable is the sum of amounts borrowed by a bank at the highest level of consolidation from all Eurosystem lending facilities, scaled by total assets. We control for a large number of variables, including offer characteristics (size and purpose of the offer, whether or not it is a rights issue or a private placement), bank characteristics (size, financial structure), market characteristics (stock price performance, price-to-book ratio, market volatility), macroeconomic controls (GDP, unemployment, inflation, interest rates), and country dummies. As is common in the literature, we exclude Initial Public Offerings (IPOs), secondary offerings, and registrations as the motives behind these announcements differ from the mechanisms we are investigating. We complement our analysis with a battery of robustness checks.

Main findings

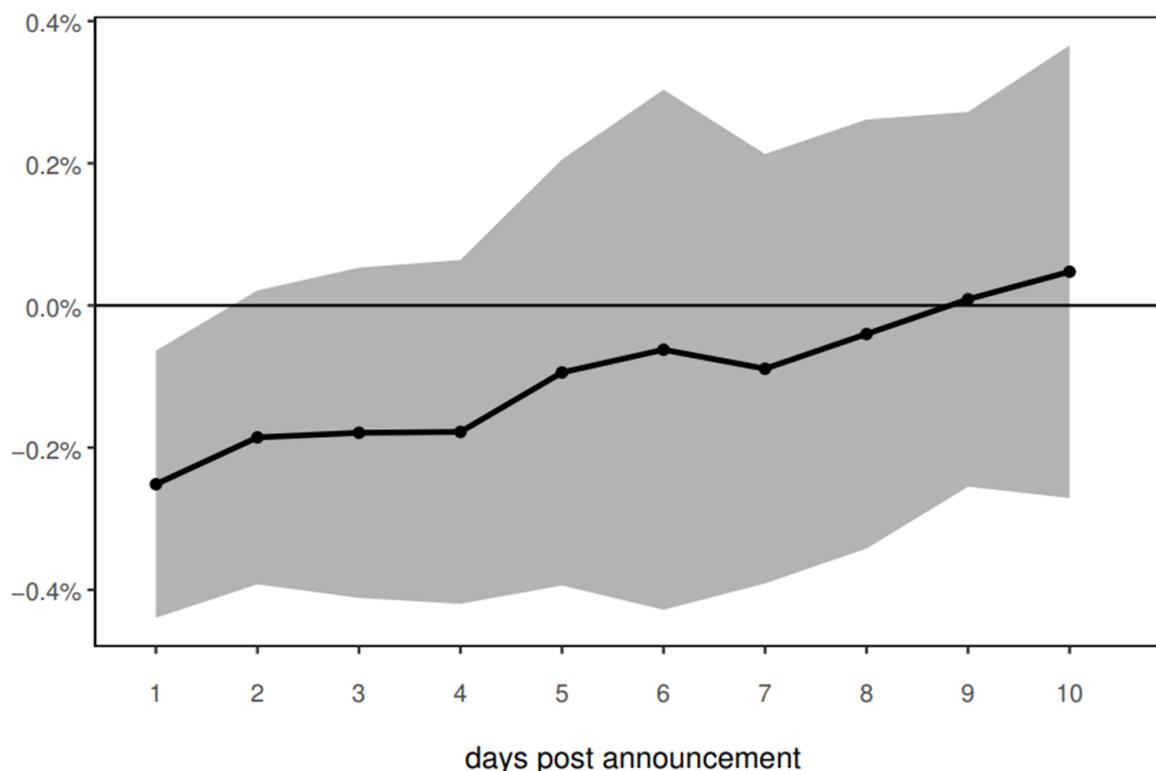
We estimate negative CARs in the days following a SEO announcement. These negative estimates align with most empirical literature and suggest that banks' offerings tend to cause negative signaling effects. Moreover, we find that the magnitude of the negative signaling effects increases with a bank's reliance on lending operations in a one-day window around the offering announcement. This additional negative effect is robust across various alternative specifications in which we add progressively offer, bank, market, and macroeconomic controls. In the richest specification, the estimated coefficient value suggests that one percentage point of additional lending from the central bank relative to assets is associated with 2.5 basis points (bps) lower CARs around a SEO announcement. Thus, for a bank with an average take-up in lending operations, which was around 6 percent in the post-2008 period, the CAR over the one-day window would be around 15 bps lower than for a bank with no take-up. However, for a bank with a take-up at the 90th percentile (which was around 17 percent), the CAR would be 42 bps lower than a bank with no take-up. Hence, banks' participation in lending operations seems to increase the negative signaling effect.

The estimation results are in line with our prior that central bank lending operations could facilitate banks' management to optimize the timing of equity offerings, which could exacerbate the negative signaling effects caused by information asymmetries between a bank's management and outside investors. Lending operations improve a bank's liquidity position and – particularly since 2008 – provide attractive funding, which reduces the likelihood that banks would be forced to raise equity under adverse circumstances.

We also find that other factors related to offering and bank characteristics explain part of the negative CARs following a SEO announcement. One of these factors is the purpose of the offering: if it is motivated by the desire to strengthen capital ratios, this has an additional negative effect. The result on the purpose of the offering seems inconsistent with the fact that such offers may be less discretionary – as regulators often require banks to strengthen their capitalization– and, therefore, less prone to signaling problems. However, the aforementioned negative effect is consistent with the previous empirical literature (see Veld et al., 2020), which finds a similar result for SEOs that are carried out to pay down debt. Another relevant factor that increases the negative impact of SEO announcements is a bank's leverage ratio. This may be because a higher leverage ratio – meaning that banks have relatively more equity – may be associated with more severe agency problems and consequently signaling effects.

To better understand how the impact of larger reliance on central bank financing evolves over a longer announcement window and how it could affect equity flotation costs, we re-run the regressions by extending the upper bound of the announcement window up to ten days post-announcement. We present the sequence of estimated coefficients of banks' participation in lending operations for different windows up to ten days post-announcement in Figure 3. We observe that the negative impact of lending operations fades away beyond a two-day window as the estimated coefficient is not statistically significant at the 95 percent confidence level.

Figure 3: Impact of lending operations on stock performance following SEO announcement



Source: Giuliadori et al. (2022). Impact of one percent higher lending operations (proportion of total assets) on the cumulative abnormal return (CAR) following a SEO announcement over different announcement windows; point estimate and 95% confidence interval.

At the same time, the leverage and stock price volatility variables are significant for the longer windows, while the size of these coefficients increases. Similarly, offer characteristics, such as whether the offering is a private placement, seem to be associated with less negative reactions and have more influence in the wider windows.

Altogether, a bank's reliance on central bank financing contains information and seems to interact with the SEO announcement signals around the announcement. However, the stock price underperformance over longer announcement windows – which is most relevant for equity raising costs – is more related to fundamental variables, such as market conditions and balance sheet strength at the time of the announcement.

Policy implications

Our results imply that banks' participation in central bank lending operations exacerbate negative signaling effects of equity offering announcements. Lending operations facilitate banks' efforts to improve their capital and liquidity positions, but the resulting flexibility also creates more opportunities for market timing and hence, scope for negative signaling effects. One way to interpret this is that while attractive lending operations can help banks boost their liquidity and solvency, at the same time, they may discourage banks from increasing their robustness by raising equity. However, the impact of lending operations is only short-lived, which is common in event studies but also suggests that it may not be a major concern for banks and authorities like central banks and supervisors. Hence, while we find a statistically significant effect on the impact of lending operations, this effect is unlikely to have a major impact on banks' considerations of raising equity. ■

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