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The Impact of the Strategic Sale of Restructured Banks: Evidence from Indonesia

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Summary. — We examine the effect of strategic sale, which is the sale of banks to strategic foreign investors, on bank performance. The Government of Indonesia implemented such a policy as part of a bank restructuring in the aftermath of the 1998 banking crisis. Using difference-in-differences models, we find that strategic sale leads to a 12–15% cost reduction. These results are robust to the use of other estimators such as difference-in-differences matching estimators and stochastic-frontier analysis, to that of other performance measures such as return on assets and net interest margin, and to that of different sample types. These results suggest that strategic sale could play an important role in restructuring troubled banks in developing countries.

Key words — banking regulation, banking crisis, difference-in-difference models, Asia, Indonesia

1. INTRODUCTION

Banking crises may lead to painful recessions and slow economic recoveries. They also often call for governments to recapitalize distressed banks and restructure the industry, which may use up much of a government's budget. [1]

Governments typically implement a mix of regulatory forbearance, loan write-offs, asset workout subsidies, debt forgiveness, bank recapitalization, and bank sales. This policy mix could determine how soon the banking industry stabilizes and banks start lending. [2] Because banking constitutes a large part of the financial industry, especially in developing countries, bank restructuring would in turn affect how fast the economy recovers.

In the aftermath of the 1998 financial and banking crisis, the Government of Indonesia implemented banking reform in which strategic sale—the sale to strategic foreign investors of private banks that the government has taken over and then recapitalized—was a key policy. This move, like many privatization drives, drew controversies and proved unpopular. Proponents argued that in addition to helping the government finance its budget deficit, the sale would allow foreign investors to manage the banks and improve their performance with much more success than the government agencies had. Opponents countered that foreign investors might become involved only for a quick financial gain. Some argued that the government sold the banks at fire-sale prices, and that improving the banks' performance before selling them would have allowed the government to sell at higher prices.

We delve into this debate by empirically evaluating the effect of this strategic sale on bank performance. The central questions are as follows: Does strategic sale improve a bank's cost efficiency? How large is the average effect of strategic sale on a bank's costs? How does this effect evolve over time? Does strategic sale improve other measures of bank performance such as return on assets (ROA), net interest margin (NIM), and the amount of nonperforming loans (NPL)?

We apply recent advances in the econometrics of program evaluation in our analysis. More specifically, we are interested in uncovering causal effects of the strategic sale of those recapitalized banks on their performance. Here, the strategic sale of restructured banks is considered a "treatment," and we are interested in evaluating the effect of this treatment intervention on the outcome, that is to say, bank performance. Obviously, we can only observe performance after a bank is sold to strategic investors; we cannot observe the "counterfactual" outcome, that is, its performance had it not been sold to strategic investors. We therefore need to estimate these counterfactuals.

One potentially tricky issue in our causal analysis is the self-selection bias. In other words, investors may "cherry pick" the most promising banks, and the government may sell only the best banks to maximize revenue, but these choices may not be orthogonal to unobservable factors that affect bank performance. Fortunately, the circumstances of the sale and, hence, the structure of our data, reduce this potential source of bias to some extent: The government does not systematically choose which banks it sells to maximize revenue, and investors can buy only recapitalized private banks because no other (government-controlled) banks are for sale. Moreover, to control for time-invariant, unobserved bank characteristics that may confound identification, we use panel data and difference-in-differences models. Further, to address some potential biases in these models, we use generalized difference-in-differences matching estimators.

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To estimate the effect of strategic sale on a bank's costs, we introduce a dummy for banks sold to strategic investors in a regression of (the logarithm of) bank costs on a translog function of bank outputs and price of input and a bank's time-varying characteristics. The coefficient of this dummy measures the average effect of strategic sale on the performance of banks sold to strategic foreign investors (the average effect of treatment on the treated banks).

Our difference-in-differences estimates show that a strategic sale reduces a bank's costs, and economically does so quite significantly. On average, banks sold to strategic investors have about 12–15% lower costs, which they are able to lower substantially using a combination of actions. For example, Bank Danamon, which was placed under the authority of the Indonesian Bank Restructuring Agency (IBRA) in April 1989 and subsequently sold to a foreign private investor in June 2003, was able to improve its loan-to-deposit ratio from 12% in 1999 to 39% in 2004, to reduce the number of branches from 752 in 1997 to 477 at the end of 2003, and to cut down the number of employees from 17,249 in 1997 to 13,225 at the end of 2003.[3] Similarly, other banks also substantially improved their loan-to-deposit ratio after being sold to foreign investors by reducing their nonperforming loans and increasing their deposit base (Sato, 2005).

The estimates of the combined difference-in-differences and matching models support this finding. Using observations in the common support, we find that the effect of the strategic sale is about 3%, although statistically this is insignificant because the number of observations shrinks considerably. But using observations in a less strictly defined common support, we find the strategic sale to be associated with 11% lower costs. A generalized difference-in-differences kernel estimator also shows similar results: Again using observations in the less strictly defined common support, we find the strategic sale to be associated with about 20% lower costs.

We also perform some robustness checks. Using a more homogenous sample of banks, that is, private national banks only, we find that our results are quite robust. We then estimate the effect of the strategic sale using stochastic frontier analysis and also obtain similar results. The evolution of the effect of strategic sale also reveals a similar pattern of cost reduction. During the acquisition quarter, we find no effect of strategic sale. But starting from the second quarter, the performance of banks sold to strategic foreign investors improves so that by the second year they enjoy cumulative 12–16% lower costs. We also estimate the effect of strategic sale on other performance measures using the generalized kernel difference-in-differences models, and find that strategic sale is associated with higher bank ROA and NIM and a lower NPL.

Our results suggest that strategic sale improves bank performance, and hence could play an important role in banking restructuring.[4] Strategic sale improves performance for a number of reasons. First, foreign strategic investors often bring improved banking practices, for example, sophisticated risk management practices and technology from their parent banks that can boost the performance of the acquired banks.[5] Moreover, new investors may also employ better human capital, which can considerably improve bank performance.[6]

Second, bailed-out banks may suffer from the usual problems of public enterprises, such as political intervention, inefficient corporate governance, and the lack of competitive pressure.[7] When strategic foreign investors take control of these banks, they improve the banks' corporate governance and bring in new management teams whose interests are more aligned with their own. Moreover, because the bankers are no longer reporting to the government, the banks do not suffer from any political intervention anymore.[8]

Our paper is related to the literature on bank privatization. Papers in this literature can generally be divided into two groups. The first group consists of papers that examine the effect of selling (fully or partially) state-owned banks to domestic and (or) foreign private investors through a privatization program. This group focuses more on banks that have state ownership to begin with, rather than private banks that were nationalized and placed under state ownership. Megginson (2005), who presented a survey of this group of papers, concluded that state-owned banks are less efficient than privately owned banks and advocated that governments should fully rather than partially privatize state-owned banks. A similar conclusion was also echoed by Clarke, Cull, and Shirley (2005), who argued in their survey paper that if the government keeps no shares in privatized banks, privatization will improve bank performance.[9]

Thus, the existing results suggest that privately owned banks perform better than state-owned banks. Interestingly, the empirical evidence presented by Cornett, Guo, Khaksari, and Tehranian (2010) shows that the superiority of privately owned banks also depends on the underlying condition of the financial market. During a financial crisis, state-owned banks tend to suffer from deterioration in performance more than their privately owned counterparts. But after the crisis, the state-owned banks are able to close the performance gap significantly.

The second group of papers examines the impact of privatizing state-owned banks that were previously privately owned but then taken over and placed under government administration following systemic banking crises. Notable examples of these papers are the following. Haber (2005) investigated the privatization of Mexican banks in 1991, which had been previously nationalized in 1982. Some of these banks were subsequently re-nationalized when the Tequila crisis hit Mexico in 1991. Several years later, in 1997, these banks were again re-privatized and sold to foreign investors. Haber showed that the first wave of privatization was not really successful in improving the efficiency of the banking industry because of the absence of strong enforcement of contractual rights. The second wave of privatization was relatively more successful than the first, although it was also still not fully optimal because the enforcement of contractual rights remained notably weak despite improvement in the overall bank monitoring system.

Williams and Nguyen (2005) also examined the link between privatization and bank performance. But rather than focusing their analysis exclusively on the privatization issue, they looked at general changes in bank governance, including those resulting not only from bank privatization, but also from acquisition by foreign banks, domestic mergers and acquisitions, and bank restructuring programs. Covering the period 1990–2003 in Indonesia, Korea, Malaysia, the Philippines, and Thailand, their results showed that changes in bank governance induced by privatization significantly improved bank performance.

Clarke, Cull, and Fuchs (2009) analyzed the impact of the privatization of recapitalized banks on bank performance in Uganda and found that it positively affected bank efficiency. Finally, Ariff and Can (2009) compared bank efficiency in the pre- and post-International Monetary Fund (IMF) restructuring periods in several East Asian countries and showed that the recapitalization and re-privatization of badly performing banks significantly improved efficiency.