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Bank performance and the financial crisis: evidence from Kazakhstan

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Abstract

During the first phase of the financial crisis in 2008/09, after Iceland and Belgium, Kazakhstan experienced the most significant bank failures as a share of bank system assets. Using rich monthly data for virtually the entire Kazakh banking industry for the period March 2007–December 2010, Stochastic Frontier Analysis (SFA) is used to fit several functions (cost, revenue, standard profit, alternative profit and input distance). Among other things, we estimate the effects of two measures of the quality and risk of the loan portfolio on the industry best practice frontiers and bank inefficiencies. We find that an i desirable effect or is consiste

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Notes

[1] In the extant literature, Kazakh banks have featured in a number of cross-country studies on the affect of financial development on banking efficiency (e.g. Fries and Taci, 2005; De Haas et al., 2010; Turk Ariss, 2010). The first of these studies analyses banking efficiency across 60 countries, whereas the latter study uses a sample of banks in 15 countries. These studies provide a regional picture of bank efficiency although it is debatable if it makes sense to compare the findings of such studies because often the samples are very different. Interestingly, in the latter study, on average, Kazakh banks are the most efficient in the sample. This finding provides further motivation for an efficiency analysis which focuses exclusively on Kazakh banks.

[2] The Oil Fund was set up in 2001 to manage Kazakhstan's liquid surplus oil revenue to avoid a situation resembling the Dutch Disease (IMF, 2001).

[3] Berger and Mester (1997) favour the alternative profit function over the standard specification if: (i) there are substantial unmeasured differences in the quality of services provided by banks because the alternative profit function holds the quantities of outputs constant and captures differences in quality by allowing output prices to vary; (ii) a bank cannot achieve every output scale and product mix because the quantities of its outputs exhibit very little variability; (iii) the banking industry is imperfectly competitive; (iv) there is likely to be measurement error in the data on output p

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[5] In May the newly formed nd Financial Organiza

[6] OBS includes total contingent claims which contain letters of credit, guarantees, deposits and loans placed in the future, possible claims on bills, and the purchase and sale of financial derivatives.

[7] The score for a loan is calculated according to, among other things: the financial condition and rating of the borrower; the quality of the collateral; any extensions to the repayment period; any write-offs of the borrower by other creditors; any overdue payments. Details of the five categories of doubtful loans are as follows: Category 1 – substandard loans with current payments; Category 2 – substandard loans with payments in arrears; Category 3 – unsatisfactory loans with current payments; Category 4 – unsatisfactory loans with payments in arrears; Category 5 – doubtful loans.

[8] The bank size dummies are based on a size categorization of banks according to total assets. In particular, banks are classified as: small – if their total assets are less than 10 000 000 (000s) KZT; medium – if their total assets are between 10 000 000 (000s) KZT and 1 000 000 000 (000s) KZT; large – if their total assets exceed 1 000 000 000 (000s) KZT.

[9] Cost (Alternative profit) returns to scale (RTS) can be defined as the percentage change in cost (alternative profit) as a result of a one percent increase in all outputs. In other words, cost (alternative profit) RTS are equal to the reciprocal of the sum of the cost (alternative profit) elasticities with respect to the outputs, i.e., . It follows therefore from a fitted input distance function that . Revenue RTS can be defined as the percentage change in revenue when there is a one percent increase in all inputs, i.e., .