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Dwarf banks

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ABSTRACT

This study examines the business model and the viability of very small commercial banks in emerging market context. Using a unique sample of 141 Russian banks with less than a \$10 million in assets, I trace performance, survival, recapitalization and growth patterns of these dwarf banks in response to the sharp increase in the minimum capital requirements. I find that dwarf banks are, on average, low-risk financial intermediaries that perform simple operations and have significantly higher survival rates in local markets with poor economic and banking services outreach characteristics. I also find that the average dwarf banks withstand the regulatory capital shock surprisingly well by securing fresh capital injection followed by a twofold asset size increase. The results of this study contribute to the literature on the relationship between the small bank business model, local banking markets characteristics and long-term viability. They also provide new evidence on the expected and unexpected outcomes of the "too small to survive" regulatory intervention into the banking market size structures.

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1. Introduction

Can a very small commercial bank, with total assets of less than \$10 million, perform any meaningful financial intermediation? Which characteristics of the local banking markets help to explain these dwarf banks' surprising viability? What are the causes and consequences of the dwarf bank decision to stay in the business in the face of the strong regulatory shock that redoubles the minimal capital requirements? How does the "too small to survive" regulatory intervention effect small bank business model, survival and growth?

This study addresses these questions empirically by combining a "too small to survive" regulatory experiment, a detailed dataset on forty-eight local banking markets that vary markedly by their development characteristics and a unique sample of 141 banks that are tiny by all international standards. I define a dwarf bank as a commercial bank with total assets below \$10 million. The average size of a dwarf bank in my sample is only \$5.2 million, while the asset size of the smallest bank is only \$68 thousand. ¹

The financial performance and survival of small commercial banks has always been of interest to scholars and regulators. A variety of studies support the hypothesis that small banks have informational advantages in processing "soft" information and relationship lending (Cole et al., 2004; Berger et al., 2005; Scott, 2004), promoting economic growth (Berger et al., 2004) and representing a viable business model (DeYoung et al., 2004; Keeton, 2003; Nakamura, 1994). Several recent studies also document significant shifts in the traditional small bank business model, including the use of credit scoring models and lending to relatively large firms (Berger and Rice, 2010; Berger and Black, 2011).

This study also builds on the relatively new but actively evolving literature regarding the importance of the banking services' outreach and the pronounced inequalities in the access to and the use of formal financial services by firms and households around the world, with an emphasis on recent developments in emerging banking markets (Beck et al., 2007; Allen et al., 2012; Claessens, 2006; Honohan, 2008).

The case of Russia represents a promising laboratory to study small bank business models and their viability. At the early stages of post-soviet banking sector development, liberal entry requirements gave rise to a large number of very small banks. While the country's banking industry experienced dramatic changes and growth since the early 1990s, many of these dwarf banks have remained viable, one-branch intermediaries in the subsequent twenty years. This study exploits the two pronounced exogenous shocks, the recent financial crisis and the "too small to survive" regulatory intervention in Russia, to examine the rationale of dwarf bank's decisions to either stay or quit from the banking sector, as well as the determinants of their recapitalization and expedited growth.

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¹ In the modern US banking literature, for example, a small (community) bank is commonly defined as a commercial bank with less than \$1 billion asset size.

I find that dwarf banks, as a group, are low-risk financial intermediaries that operate with unconventionally high capital ratios and low credit risk, perform simple payment, lending and deposit-taking operations and diversify their service portfolios by relying on noninterest (commission-based) income sources. I also find that dwarf banks in economically stagnant and underdeveloped local banking markets with poor outreach characteristics have better prospects for survival. Another reliable predictor of dwarf bank survival is bank activity in the retail lending segment and low non-performing loans ratio. These findings broadly support the prior literature results on the unique expertise advantages of small financial intermediaries in retail and relationship lending.

Contrary to regulatory expectations, an overwhelming majority of dwarf bank survived the new capital requirements shock and chose to stay in the banking sector as independent intermediaries by securing substantial new capital injections. During the 5-year sample period, from 2006 to 2011, only 23% of the sample dwarf banks exited the banking system and the majority of these exits were related to regulatory interventions instead of voluntarily closures or reorganizations. Following the average twofold increase in the equity levels, most banks that survived demonstrated impressive growth with 91% of them outgrowing the dwarf asset size threshold by the end of 2011. Interestingly, the structure of operations in these banks remains relatively stable. However, the performance profiles of banks that survived but remained in dwarf size, has changed dramatically. Now these dwarf banks have capital ratios above 70% and face an uncertain future.

The results of this natural experiment study contribute to the broader literature on the small bank business model and the determinants of its viability. They also show that a small banking segment fits well into the economically depressed and financially underserved banking markets and that country-level indicators may be misleading in evaluating the banking services' outreach, especially in countries with economically depressed regional pockets. From a regulatory perspective, the results of this study confirm that any regulatory intervention will likely have not only intended and anticipated but also unintended and unanticipated consequences.

The rest of the paper is organized as follows. Section 2 provides background on the rise and fall of dwarf commercial banks in Russia and explains the regulatory reforms and regulatory concerns associated with these banks. In Section 3, I describe my data and data sources. Section 4 presents the results of the empirical analysis, and Section 5 concludes the paper.

2. Background: The rise and fall of dwarf banks in Russia

As of the end of 2011, the Russian banking system consisted of 978 active credit institutions. In terms of the number of banks, it is the third largest banking sector in the world after the United States and Germany. In terms of total assets, the numbers are more modest but are rapidly growing: the bank assets to GDP ratio is at 76.6%, the private credit to GDP ratio is 42.8% and the average annual asset growth rate ranges from 30% to 40% in all recent years, as presented in Fig. 1.

The country's banking system is both concentrated and fragmented as it consists of a few large banks and a large number of small and very small banks. As of the end of 2011, the five largest banks collectively controlled 50% of the total assets; the top 200 largest banks controlled 94% of assets. The banking system is also heavily dominated by the state-controlled monopolist, Sberbank, which accounts for 26% of the industry assets and 43% of households' deposits.

The presence of a large number of small banks is commonly attributed to the origins of the private banking system in Russia. In the early 90s, to build a private commercial banking system from scratch, the regulators set a very low minimum capital requirement. In 1993, for example, the minimal capital requirement for *de novo* banks was set at 100 million rubles, equivalent to only \$94,000 at that time. As a result of the liberal entry regime, new banks with very low initial size mushroomed at unprecedented speed (Fig. 1). By the end of 1994, Russia had 2457 commercial banks and 51% of those had capital of less than one billion rubles (or only \$225,000 at that time).

The early regulatory idea was that small banks would gradually increase their size through the asset growth and/or consolidation. The number of banks has indeed decreased dramatically; however, the reason for the reduction in the number of banks was mostly due to the licenses' withdrawals for frequent financial and legal violations instead of the mergers and acquisitions.

Except for the early years of the banking system formation, the regulatory environment has not been supportive of small banks. Since the late 90s, the small banks sector has been under continuous pressure to consolidate. One regulatory concern associated with the presence of dwarf banks was potential compliance risks and the regulatory burden required to supervise a large number of banks. Another major regulatory concern was that banks at the bottom tier might have incentives to gamble by engaging in high-risk and even illegal operations (money laundering and tax

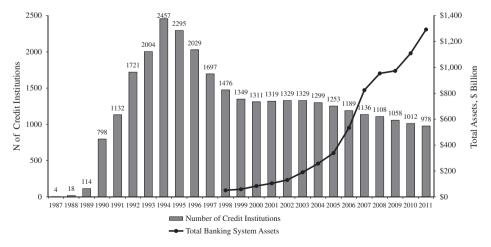


Fig. 1. Evolution of the Russian Banking Sector: Number of Banks and Total Assets (1987–2011). The bar graph shows an explosive growth of the number of licensed and active banks in Russia during the early years of post-Soviet transition to the market economy, from only four registered banks in 1987 to 2457 banks as of the end of 1994. Since this peak, the number of banks is gradually decreasing, mostly due to the bank license revocations by the CBR. The publicly disclosed annual asset size statistics (line graph) is available since 1998 only. The ruble values are converted to US dollars at the year-end exchange rates.

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