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Shareholder diversification and bank risk-taking

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ABSTRACT

Using the entire universe of *Bankscope* and *Amadeus Top 250,000* we construct the portfolios of shareholders who hold equity stakes in publicly traded and privately held European banks for each year over the period 1999–2008. We show that about 62% of banks' ultimate largest shareholders are diversified investors, holding on average equity investments from thirteen companies in their portfolio. We exploit this heterogeneity to investigate the impact of their portfolio diversification on bank risk-taking. Our results show that banks with more diversified shareholders undertake more risks. This relation is both statistically significant and economically sizeable. Overall, these findings contribute to the literature by studying for the first time a specific channel through which financial development, in the form of bank shareholders' diversification, affects the banks' risk-taking decisions.

1. Introduction

The pivotal role of financial intermediaries in general, and banks in particular, is to choose which firms get to use society's savings (Schumpeter, 1934). This allows the economic system to grow and decreases aggregate volatility by redistributing risks (e.g. Levine, 1997, 2005 for extensive surveys). The recent financial crisis has highlighted the degree to which global economies are exposed to (excessive) risk-taking by banks.[1] Yet little is known about the drivers behind risk-taking behaviour by banks.

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[1] *"The depth and severity of the crisis were amplified by weaknesses in the banking sector such as excessive leverage, inadequate and low quality capital, and insufficient liquidity buffers [...] Moreover, failure to capture major on and off-balance sheet risks, as well as derivative related exposures, was a key factor that amplified the crisis [...]"* (Basel Committee on Banking Supervision, 2010, p.4).

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In this paper we study a specific determinant of risk-taking, the portfolio diversification of banks' largest shareholders. We provide evidence that banks whose largest shareholders are more diversified take more risks than those whose largest shareholders have relatively less diversified portfolios.

Controlling shareholders who are more diversified generally have stronger incentives to undertake riskier projects. They are less concerned with the firm-specific risk than shareholders who have most of their wealth concentrated in one single firm (Jensen and Meckling, 1976). Parrino et al. (2005) show in their simulations how diversified wealth makes agents less risk averse in taking investment decisions; while Faccio et al. (2011) provide strong empirical evidence of a positive relation between large shareholder portfolio diversification and risk-taking in non-financial companies.

Previous studies in the banking literature have used ownership as a proxy for wealth diversification and often find contrasting results. Saunders et al. (1990) find that (small) increases in managerial stock ownership make managers more closely aligned with shareholder incentives to undertake more risk. Anderson and Fraser (2000) show a negative relation between managerial ownership and bank risk-taking only when regulations designed to reduce risk-taking are in place. Knopf and Teall (1996) and Cebenoyan et al. (1999) report an inverse relation between thrift institutions risk-taking and the level of ownership by institutional investors, who are assumed to be diversified shareholders. On the other hand, Barry et al. (2011), Erkens et al. (2012) and Cheng et al. (2015) find a positive association between institutional investors and risk-taking choices. Further, Laeven and Levine (2009) and Beltratti and Stulz (2012) find that bank risk-taking is higher when banks are owned by powerful shareholders with large cash flow rights, who are assumed to be diversified investors.

To our knowledge Sullivan and Spong (2007) is the only work that studies the effect of insiders' personal wealth on risk-taking decisions; their study covers a small sample of US banks between 1993 and 1994. They find that bank earnings volatility decreases when insiders' wealth is more concentrated in the bank they manage. (For an extensive survey of the literature on the corporate governance of banks see de Haan and Vlahu, 2013).

Using the entire universe of *Bankscope* and *Amadeus Top 250,000* we are able to construct the portfolio of the ultimate largest shareholders of publicly traded and privately held European banks for each year over the period 1999–2008. The European banking system is one of the largest among those in the developed economies. In its latest report, the European Banking Federation shows that at the end of 2010 European banks held on average five and six times more assets than the US and Japanese banks respectively. Further, bank deposits compared to total GDP in Europe was reported as 139%, while the same figure was around 59% in the US and 137% in Japan. Also, bank loans in Europe were equal to 144% of GDP, compared with 45% in the US and 96% in Japan (European Banking Federation, 2011).[2] These figures show how the European economy is indeed very heavily bank-oriented. Given the central role played by the banking system in the economy, European data offer an interesting case to investigate and enhance our understanding of the incentives that regulate bank risk-taking decisions.

We provide novel evidence on the level of diversification of large shareholders in the banking sector. We show that bank largest ultimate shareholders hold on average equity investments in thirteen different firms.[3] Overall, 62% of shareholders hold investments in at least two companies and some of them (23%) do so in ten or more. The average bank largest ultimate shareholder owns almost 39% (40%) of the bank's total cash flow rights (control rights), suggesting that, at least in Europe, shareholding in banks is not widely spread. This is consistent with Caprio et al. (2007) and Laeven and Levine (2009). It is thus reasonable to expect that bank largest ultimate shareholders are indeed able to exercise an element of control over the risk-taking choices of the banks they own.[4] Interestingly, the correlation between portfolio diversification and total cash flow rights is only −0.2, which suggests some caution should be exercised in using ownership concentration as an inverse proxy for portfolio diversification (similar figures are reported in Faccio et al., 2011).

[2] The European Banking Federation collects banking sector data from its Members and Associates on an annual basis.

[3] Previous studies report an average of 2.4 stocks held by Finnish individuals (Karhunen and Keloharju, 2001), four to seven by the typical US individual investor (Barber and Odean, 2000; Goetzmann and Kumar, 2008), and about four by the average largest shareholder of non-financial companies in Europe (Faccio et al., 2011).

[4] In fact, all other shareholders hold on average only 4% of the *Cash Flow Rights*.