5 The impact of European banking consolidation on loan prices

The recent financial crisis highlighted important vulnerabilities of the EMU that resulted in the fragmentation of the European financial markets and the increased consolidation of European banking systems. The crisis increased the uncertainty on the actual situation of the economies and banks. International wholesale market transactions dropped, interbank market activity halted, the use of foreign collateral declined and a sovereign-banking risk loop emerged. When the crisis started financial markets started to work as a plethora of national markets. This trend inverted only after the ECB committed to do "whatever it takes" to preserve the euro on August 2012. As for banking consolidation, the crisis forced banks to merge as a result of some players' vulnerability. In other cases, low profitability and efficiency pushed banks to search for synergies via M&A.

The key question is whether the increase in concentration has been large enough to affect credit price formation. According to economic literature a Herfindahl Index below 1000 signals a highly competitive market. Portugal is the only country in our sample with an index above 1000. In order to check this hypothesis, a concentration measure will be introduced as one of the determinants of credit interest rates in Spain, France, Italy and Portugal, to see whether it turns to be significant and has a positive coefficient.

The determinants of credit interest rates

Lending rates in the EMU are affected by a variety of factors: a) the risk-free interest rate; b) the funding cost, linked to the marginal cost of funding and the sovereign risk; c) credit risk calculation; d) operational risk; e) fees and commissions; and f) the commercial margin.

As series synthesizing all these factors are not available, we used monthly data since 2003 to estimate the relationship between the interest rates[5] of new lending operations to SMEs (using loans of less than 1 million euros as a proxy) and corporates (loans of more than 1 million euros) in the main EMU peripheral countries (Spain, Italy and Portugal) and one core country (France) using: 1) the official ECB rate; 2) the spread between Euribor and the official rate; 3) the spread between the interest rate on government debt in the theoretical monetary union and Euribor; 4) the spread between the debt of the theoretical monetary union and each country's sovereign debt; and 5) firms' default rate.

Our findings show that the decline in financial fragmentation (particularly country risk) translated into lower prices in all loan portfolios, although in a delayed, partial and heterogeneous way. While financial fragmentation started decreasing by mid-2012, firms' credit interest rates in peripheral countries only started falling by mid-2014, in line with

5: See "Determinantes de los tipos de interés de las carteras de crédito en la Eurozona" Doc. Trabajo 16/11 junio 2016. José Félix Izquierdo: https://www.bbvaresearch.com/publicaciones/determinantes-de-los-tipos-de-interes-de-las-carteras-de-credito-en-la-eurozona/

the ECB quantitative easing program and TLTRO liquidity auctions. Portugal is a special case, as the government asked for an international rescue in May 2011 and the maximum interest rates were registered by end-2011 or the start of 2012. In Portugal loan rates have been higher than in the rest of the analyzed countries by more than 100 basis points throughout 2003-2016.

Our analysis shows that divergences between countries are related to national factors, which outweigh international trends. There are still differences between SME loan prices in peripheral and core countries, and smaller differences in the case of corporates (which have alternative funding sources to bank credit and operate internationally).

As expected, credit risk has an important effect in Spain, Italy and Portugal, but not in France. The effect is bigger in the case of lending to corporates than to SMEs in Spain and Italy. It is also interesting that changes in the default rate affect loan rates with a lag of 2 months in Italy and Portugal, and a lag of 3-4 months in Spain, so Spanish banks take more time to transfer credit risk changes to loan prices.

The impact of concentration on loan rates

We estimated the models again, but this time including concentration[6] as another determinant of firms' new credit interest rates. A positive coefficient would indicate that concentration as high as to affect the way in which credit prices are formed, and therefore it is altering competition. The exercise has been repeated using differing measures of concentration, but results did not vary in a significant way

As shown in table 1, concentration was not significant for the formation of corporate or SME credit rates in Spain. In the case of SME lending in France and Italy, concentration seems to have an influence as the coefficient is significant, but its sign is negative (more concentration leads to lower interest rates), so these results have been discharged. The only case in which concentration has the expected sign (positive) and it is significant is Portugal, both for SMEs and corporate loans, and using different measures of concentration (Herfindahl index or market share of the five largest entities, although the fit is better using Herfindahl). Therefore, the high banking concentration is having a negative influence on the formation of loan prices in Portugal, as they are higher than what they would be with lower concentration levels. Concentration has been high in Portugal for a protracted period, and that explains to a significant degree firms' credit interest rates

6: To ensure the homogeneity of the concentration indicators we have only used the two provided by the ECB: Herfindahl Index and the market share of five largest banks. The concentration indices have been interpolated monthly.

Table 1 Estimated banking concentration multiplier on firms interest rates: sign and significativeness

Firms interest rate	Spain	France	Italy	Portugal
Herfindahl Index				
Up to 1 mn EUR	- Not Signif	- Signif	- Signif	+ Signif
Above 1 mn EUR	- Not Signif	- Not Signif	- Not Signif	+ Signif
Market share of 5 banks				
Up to 1 mn EUR	- Not Signif	- Signif	- Signif	+ Signif
Above 1 mn EUR	- Not Signif	- Not Signif	- Not Signif	+ Signif

Source: BBVA Research based on ECB, BoF, BoI, BoP, BoS and Bloomberg

To conclude, according to our analysis except in the case of credit to non-financial firms in Portugal there is no evidence of concentration having affected competition, as it is not one of the determinants of new credit to firms' interest rates. Therefore, there is no evidence of a direct relationship between consolidation and competition and other forces may be impacting competition (institutional framework, contestability…).

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