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Comment Loretta J. Mester

Reint Gropp and Anil Kashyap provide a new measure for assessing the degree of integration of European banking markets—in particular, *retail* banking markets. The role of integration and the best way to assess the current state of integration is a particularly relevant question given the ten-year anniversary of the introduction of the euro in 1999 and the current turmoil taking place in financial markets in which banks play a central role. They have produced a thought-provoking chapter that advances the literature.

I will structure my remarks by first discussing the proposed measure in the chapter and then talking about integration more broadly.

Europe has been working toward integrating financial markets for some time. Dermine (2005) reviews some of the major legislative steps toward integration. These include the European Commission White Paper on the Completion of the Internal Market, published in 1985, which called for a single banking license; the Second Banking Directive, 1989, which allowed for cross-border bank branching; the Maastricht Treaty on European Union, 1992; the Directive on Deposit Guarantee Schemes adopted in 1994; the creation of a single currency, the euro, in 1999; and the Financial Services Action Plan of 1999, which laid out a number of initiatives to promote integration of banking and capital markets by 2005.

Before we can assess the benefits of the Gropp and Kashyap measure of integration over others in the literature, we need a definition of integration and a sense of what benefits integration is expected to provide to the economy. According to the European Central Bank (ECB), the aim of financial integration in Europe is to increase the efficiency of the financial system, increase the effectiveness of the monetary policy transmission mechanism,

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increase financial stability, and increase economic development, to the extent that the financial system plays an important role in furthering economic development. Increased integration is expected to lead to increased competition, which leads to a lower cost of production and better allocation of savings toward investment.

Gropp and Kashyap (2009) start with the ECB's definition of financial integration. According to the ECB, a financial market is integrated if all potential market participants are subject to a single set of rules when dealing in the financial instrument or service, have equal access to the instrument or service, and are treated equally when operating in the market. The authors add to this definition the idea of efficiency, which is gained if markets are contestable and the market for corporate control is well-functioning.

In designing measures of integration it would be useful if the measures gave some indication of where integration failure has occurred and point policymakers toward actions to remedy impediments. Gropp and Kashyap provide some evidence on this. Much of the focus to date has been on integrating settlement and clearing systems. In my view, more emphasis should be focused on harmonizing regulatory structures. In particular, the recent events in banking markets suggest that retail markets are integrated enough for deposits to flow to markets with higher safety net protections. Harmonizing the supervisory and regulatory structures, deposit insurance systems, procedures for resolving banking failures, and procedures followed in the midst of financial crises would seem to be an important place to focus attention. This is consistent with the ECB's definition of operating with a single set of rules and being treated equally when operating in the market.

It would also be useful if the measures of integration could inform us about what we can expect from integration. Has financial integration been oversold? Are the gains to integration unbounded? Does integration create some costs that have to be weighed against the benefits of integration? Making cross-border transactions more efficient is a benefit, as more economic activity occurs across borders, but such efficiency also carries a cost in unstable times, especially if the regulatory structures across borders are not harmonized. Can we develop measures that relate integration to the *net* benefits?

The literature on integration has mainly focused on three other types of metrics: (a) cross-border retail operations of banks—flow measures; (b) cross-border bank mergers; and (c) retail interest rate convergence. The ECB has developed a number of metrics for assessing the degree of integration across several market segments of the financial system, including money, bond, equity, and banking markets. These metrics are available in the ECB's report on Financial Integration in Europe (the first report was published in March 2007 and the second in April 2008). The conclusion of the latest report is that the degree of integration varies across market segments. The money market is highly integrated, helped by integration of the high-value

payment systems across countries and the recent introduction of the TARGET2 system for wholesales payments. Government and corporate bond markets, and even equity markets, have a considerable degree of integration, aided by the development of securities clearing and settlement systems. Wholesale banking markets have become more integrated; retail banking markets in Europe remain fragmented.

The ECB (2008) report provides indicators on retail banking in three categories: (a) cross-border presence indicators like dispersion in the number of bank branches and subsidiaries and volume of assets across euro area countries, and number and value of cross-border M&As; (b) price-based indicators like convergence of retail interest rates; and (c) quantity-based indicators like diversification of deposit and loan amounts across countries. According to the ECB report, from 2001 to 2007, the median share of banking assets of foreign subsidiaries increased from 8.8 percent to 14.4 percent of total banking assets, but the median share of assets of foreign branches decreased slightly over time to about 2.0 percent in 2007. Thus, most of the assets of the euro area banks in other euro area countries are still held in subsidiaries rather than in branches. The number of cross-border M&As has been less than the number of within-country M&As in the banking industry, but there has been an increase in euro area cross-border M&A transactions in terms of value since 2003. The dispersion of interest rates on loans to households for consumption purposes has remained relatively high and has tended to increase in recent years.

Gropp and Kashyap (2008) critique the interest rate metrics used in the literature, arguing that these are inappropriate measures because there is so much heterogeneity in demand in retail banking products across markets. Unless this heterogeneity is adequately controlled for, one should not expect the prices of retail products to be the same across markets. They argue that the law of one price does not hold because of this heterogeneity. But an alternative view is that if we adequately defined the product, the law of one price holds, but it holds for the individual products' characteristics (hedonic pricing), and so the convergence test is difficult to implement. Presumably the heterogeneity they are thinking about is fundamental—for example, differences in search costs, which mean that even within a single market we would not expect a single price—and not due to different regulatory conditions or rules across countries. If price differences are due to different rules under which financial systems operate across countries, we would not want to forgive such differences in assessing the degree of integration—that is, they would be an indicator of a lack of integration.

Instead of focusing on price, Gropp and Kashyap focus on bank profitability—they measure the degree of convergence of bank profit levels to the average profit level across countries. This is perhaps easier to implement, since it assumes banks choose their product characteristics appropriately to maximize profits. Their metric gets at the idea of efficiency, one

of the goals of integration. In particular, they relate integration to level of entry and exit barriers; that is, to contestability. The logic of the Gropp and Kashyap measure is straightforward: With low barriers to entry and a well-functioning market for corporate control (which implies low barriers to exit), high-cost banks (and therefore low-profit banks) would be driven out of the market, and banks would not be able to exert any market power over pricing. Thus, bank profitability would converge across banks as integration increases. To the extent that there is profit dispersion, it means there are barriers to entry and/or exit—and hence, almost by definition, low levels of integration.

The authors look for convergence by estimating a partial adjustment equation of the form:

$$\Delta ROA_{it} = \alpha + \lambda ROA_t^* - \beta ROA_{it-1} + w_{it},$$

where ROA is the book value of return on assets and ROA* is long-run equilibrium profit. They define strong integration if there is a common ROA* to which the profit rates of all banks in the world converge and weak integration if there is a common ROA* to which the profit rates of all European Union banks converge. The equation is estimated for several different groups of banks separately: listed banks, unlisted banks, savings and cooperative banks, U.S. banks, EU banks, banks with ROA > ROA*, and banks with ROA < ROA*. These latter two groups can give us some information on whether competitive forces are at work—are returns to high-profit banks being competed away—and whether the market for corporate control is working—are inefficient banks being driven from the market? The ROA* is proxied by the average ROA for the group of banks investigated. Integration is measured by the coefficient λ . As λ approaches 1, adjustment is instantaneous; as λ decreases, adjustment is slower.

The authors find that there is high convergence in the United States, limited retail bank integration in Europe for listed banks but none for unlisted banks or savings and cooperative banks, competitive forces at work but not corporate control at work for unlisted U.S. banks, and neither competitive forces nor corporate control at work for unlisted European banks. (The authors obtain qualitatively similar results when they perform a robustness test using book-value return on equity as the measure of profitability.)

I think the authors' test, with its focus on profitability, is a good alternative to those in the literature, but it also has some implementation difficulties. In particular, I believe the definition of profitability used in the implementation has several drawbacks. First, it is a book-value measure of profits. They give two reasons for using book values. First, the number of listed banks for which market values are available in Europe is low. Second, they say that efficiency in stock market valuations would be misleading about integration. I do not understand that argument. Consider two banks that operate in markets that are not integrated for banking but do have integrated equity

markets. If one bank were more efficient than the other, investors would bid up the stock market value of the efficient bank. That is, the market values would diverge even though the stock market is efficient. Presumably the stock market valuations would not converge if there were differences in the profitabilities of the banks regardless of the efficiency of the stock market. It seems preferable to use the measure most reflective of bank profits, and that would seem to be market value.

Another problem with the book-value measure is that it also ignores risk-taking. At its heart, banking is about handling risk, and the amount of risk to take on is a choice of bank management. Banks' comparative advantage follows from their unique capital structure—they obtain private information from deposit histories, which is useful in monitoring loan risk (Mester, Nakamura, and Renault 2007). Banks are able to pool deposits and loans to reduce liquidity risk and credit risk by diversification. Their capital structure, which includes demandable deposits, and its role in the payments system means banks are subject to regulation. Banks wanting to limit the costs of financial distress might limit risk-taking, while banks wanting to exploit the safety net might increase risk-taking. The risk choice is endogenous and risk-taking influences banks' production decisions, including the mix of assets they choose, asset quality, off-balance-sheet activities (some of which are used for hedging), capital structure, debt maturity, and resources allocated to risk management. All of these decisions affect cost and profitability (see Hughes, Mester, and Moon 2001; Hughes et al. 1999). If bank managers care about risk, they may trade off higher expected profit for lower risk when producing banking services, but they may also care about higher moments of the distribution of profits (e.g., profit volatility). Lower profit-lower risk production plans may result in higher value than higher profit-higher risk production plans—discounted present value depends on risk through the discount rate applied to profits and high risk might lead to financial distress, which imposes costs. Bank managers choose production plans that maximize their utility; these plans imply a subjective probability distribution of profits. Each production plan is linked to a subjective, conditional probability distribution of profit by the managers' beliefs about the probability distribution of future economic states and about how these states interact with production plans to generate profit. Given these beliefs, a bank's choice of production plan is equivalent to a choice of a conditional probability distribution of profit. If there are no agency problems, then bank managers choose the production plan that maximizes the market value of the firm.

It seems to me that to assess integration we need to account for risk-taking on the part of the banks. We would want to look at convergence in market values of banks for those that are traded and risk-adjusted profits for those that are unlisted. For example, if we saw two banks operating with the same

level of profits, but one chose an ex-ante riskier portfolio than the other, would we want to conclude there was integration? These banks would be operating on very different points on the risk-expected return frontier. To the extent that we are interested in differences in efficiency across banks, we might think about using direct measures of profit and cost efficiency rather than profit levels. This might be preferable, since it might point us toward where failures of integration are coming from—is it the cost side or the revenue side?

Let me finish my remarks by discussing whether we are asking too much from integration. Europe has been working toward integration for a long time. Integration benefits can happen only if integration leads to increased competition in the financial services industry. From the metrics in the literature and in this chapter we can tell whether integration is increasing, but we do not get a sense of what is achievable—how far can integration go? There are some reasons to be cautious here. First, there is some debate in the literature about whether retail banking markets are contestable or not. Xavier Vives (1991) argues that retail banking markets may not meet the criteria for contestability because of barriers to entry, including branch networks and economies of scale and switching costs. It could be that one of the reasons integration has been slower in the retail banking markets than in other financial services segments is due to these higher barriers to entry.

Second, despite the lower barriers to entry across U.S. banking markets, there appear to be continuing differences in efficiency across banks. Thus, expectations of the gains from integration on the efficiency side may be exaggerated. Berger and Mester (1997) find that cost inefficiency averages about 13 percent and profit inefficiency averages 50 percent, suggesting large differences in efficiency across banks in the United States, and much of the differences are unexplained—twenty-five explanatory variables explain only about 7 percent of the variance of measured cost efficiency and about 35 percent of the variance in measured profit efficiency.

Third, while integration raises the number of potential competitors who can exert discipline, evidence from the bank merger literature raises the question of whether bank mergers are value-enhancing or driven by empire building. Corporate control problems in banking can exist because the relationship between bank owners (stockholders) and bank managers is a principal-agent relationship, and the ways of controlling the behavior of bank managers may not be totally effective. Hughes et al. (2003) find that asset acquisitions are associated with worse performance when banks have entrenched management but better performance when management is not entrenched.

Fourth, one of the mechanisms for achieving integration is the market for corporate control. But recent research shows that there are differences in the notion of a corporation's purpose across countries; for example, whether

it is there for the shareholders or whether it is for all the stakeholders—shareholders, employees, bondholders, and customers (see Allen, Carletti, and Marquez 2007). These differences also mean there will be differences in corporate governance structures across countries, which may limit what is achievable by integrating banking product markets.

Finally, while integration offers potential efficiency gains, the interaction between financial integration and financial stability is not straightforward. More integration could increase financial stability via diversification of default risk, but it could also increase the possibilities for systemic risk and contagion. This potential cost needs to be recognized. Harmonizing the rules of engagement across markets would help limit this potential cost—and at the same time increase integration. The current financial crisis underscores the importance of participants facing the same rules across markets—one of the facets of the ECB definition of integration. But even though a great amount of progress has been made on harmonizing the regulatory structures across the countries of Europe, some differences remain. In particular, as we have seen, the actions taken in the midst of a crisis differ across the countries, especially when, *ex-ante*, there has not been a well-articulated process to follow. There can be conflicts of interest across regulatory bodies that have national interests. The financial crisis has illuminated the differences in the government safety net—deposit insurance and lender-of-last-resort functions—that remain across countries. In the United States, even with harmonized banking regulation, there are potential conflicts of interest across the multiple supervisory bodies (Office of the Comptroller of the Currency [OCC], Office of Thrift Supervision [OTS], Federal Reserve, Federal Deposit Insurance Corporation [FDIC]), and there is more separation between regulation of different segments of the financial services industry. In Europe there are differences in where responsibility for the bank supervisory activities lie—in the central bank or another body. This is probably not important in normal economic circumstances, but it might be during financial crises when the ability of the central bank to obtain information from the supervisory authorities in a timely manner becomes crucially important and the credibility the central bank has gained in monetary policy might be transferable to its handling of financial instability.

I want to thank the authors for their thought-provoking chapter. I do believe their proposed new metric is a contribution to the literature and has the potential to be easier to implement and more informative about integration. I would suggest trying to incorporate risk into the measure. Regarding the integration literature more broadly, I would recommend that it bring some focus to the potential costs of integration and ways to address those costs. This would help calibrate what we should expect to gain from further integration. Those further gains may come less from increased efficiency and more from reductions in systemic risk and increased coordination across countries when there is a crisis.

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