2 LEVERAGE AND RISK IN US COMMERCIAL BANKING IN THE LIGHT OF THE CURRENT FINANCIAL CRISIS[1]

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ABSTRACT

In this paper we study the relationship between leverage and risk in US commercial banking market. We employ a representative panel data set of systemically important banks that extends from 2002 to 2009 thus covering both the years before the outbreak of the current financial crisis and those that followed. Several alternative variables are used to capture both on- and off-balance-sheet leverage as well as short-term leverage. Regarding risk, it is proxied by two measures: the systemic risk potential and banks' overall risk. Our findings indicate reliably that both on- and off-balance-sheet leverage contributes to (systemic) risk, which implies that large banks do not maintain a level of leverage that could allow for equity capital to act fully as a buffer, absorbing losses and enabling the business to continue in case of financial distress. In a similar vein, a direct link between short-term leverage and risk is reported, showing that leverage is one of the main factors responsible for the serious bank liquidity shortages that were revealed in the current crisis. We also find that those banks that concentrate on traditional banking activities typically carry less risk exposure than those that are involved with new financial instruments. The latter finding could play a role in the current discussion about a possible revival of the Glass-Steagall Act. Overall, our results provide a better understanding of the main causes of the present crisis and contribute to the discussion on the reinforcement of the existing regulatory framework.

Keywords: financial crisis; risk; leverage; commercial banking

JEL classification: C23; D02; G21; G28

1 INTRODUCTION

The stability and the resilience of the global financial system has been seriously tested for more than two years now. The current crisis, whose origins can be traced in the collapsing valuations in the US sub-prime mortgage market in mid-2007, has revealed several systemic inadequacies which are strongly related to the mal-functioning of the banking sector. An important aspect of these inadequacies is the extent of bank leverage in the years before the crisis.

Bank leverage, in the standard context, refers to the use of debt (*i.e.*, borrowings) in financing investments. More specifically, a loan is used to supplement bank equity capital in financing an investment project, which is expected to produce a higher rate of return compared to the interest rate paid. In case the investment return rate turns out to be smaller than anticipated, a bank's equity will shrink and might become insufficient to repay the loan. All in all, leverage maps the riskiness of an asset position into the corresponding riskiness of its on-balance-sheet equity stake.

Leverage, however, can also be traced *off* the balance sheet. Indeed, commercial banks are eligible to transfer some part of their leverage off their balance sheets through securitization and other modern financial

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