Banks face perfect storm

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The current financial crisis follows several years of rapid growth of financial sector revenues and profits. Revenues for large European complex financial institutions grew above 20% in 2006, and profits grew even faster.[1] In the US, the financial sector represented 21% of the S&P500 market capitalization and approximately 30% of the profits. However, the financial sector has been under growing pressure which now comes to light. In reality, what we now face is a banking sector crisis.

Banks derive their revenues from three sources. First, service income from fees, commissions, and other services such as investment banking. The second source of revenues is a pure term premium, the difference between the “risk-free” short- and long-term interest rates, as banks loan or invest long-term their mostly short-term liabilities, essentially a play on the yield curve. The third source of revenues is a risk premium, as banks pay depositors and creditors a reduced risk premium given their strong financial ratings and depositors insurance, but apply these funds in loans or financial assets with typically higher risk, charging for that reason an interest rate spread.

Recent years have seen strong innovation in the financial sector particularly the origination and distribution of credit exposures through structured securities, which in combination with cyclical business such as LBOs and M&As resulted in large increases in the revenues derived from services. For example, according to the Bank of England’s Financial Stability Report, in 2006 large complex financial institutions saw fees and commissions revenues grow 20%, net interest income grow only 5% (from term and risk premia), and trading activities revenues, associated with an increasingly large trading asset portfolio, grow 35% (risk premium). However, the growth in services revenues masked growing competitive pressure on prices and margins of banking services, due to the growing role of “low-cost” banking and securities (e.g., ETFs). The current crisis affects the former revenue streams, and thus in the short run service revenues are likely to fall.

The term premium has basically vanished as central bankers in the developed world raised short-term reference interest rates but long-term rates remained nearly unchanged or even fell. Since 2004 short term reference rates rose from 2% to 4% in the Eurozone and from 1% to 4.75% in the US, after the cut in the Federal Funds Rate last week. On the other hand, German government 10-year bonds yielded 4.11% and US treasury 10-year bonds yielded 4.67% in August 2007. As a result, in August, 10-year term premium spreads were 11 basis points in the Eurozone and -35 basis points in the US. For comparison, the monthly average term premium between the US federal funds rate and 10-year treasury bonds has been 140 basis points since January 1982. Since the reference interest rate in practice functions as a ceiling for the short-term price of money (time deposits and short-term money market), the term premium has historically been one of the largest sources of revenues for the commercial banking sector. In summary, the second source of bank revenues has been under strong pressure since 2004.

The remaining source of revenues arises from the risk premium. The banking sector revenues and profit growth over the last few years can only be explained by the growth in revenues associated with the risk premium, in a period where the risk premium fell significantly. The risk premium fell precisely due to the growth in the supply of credit, as evidenced by the growth in banks' balance sheets since 2002, but also due to the growth of investment capital willing to "borrow short-term and lend long-term",[2] in some cases backed by bank credit lines. For example, an often used measure of risk, the spread between junk bonds and 10-year US treasury bonds fell from 11 percentage points in 2002 to under 3 percentage points in the beginning of 2007, while assets of large complex financial institutions rose from under $12 to $23 trillions, with trading assets representing more than 25% of total assets. For comparison, hedge-fund, bank conduits, and structured investment vehicles (SIVs), which it is often argued are a source of systemic risk to the financial system, are thought to hold assets of $2.7, $1.4, and $0.4 trillions, respectively, and thus play a much smaller role in the financial system. Despite the fall in the risk premium, bank revenues grew due to the increase in the volume and average risk of bank assets. Given the current increase in the risk premia and fall in asset prices and capital ratios, banks will have to reduce asset growth, suggesting that the revenues associated to the risk premium are also likely to decline.

Little can be done in the short run regarding service revenues, but price increases for retail bank services are likely. To allow banks to earn again some term premium either short-rates go down or long-rates have to go up. The first option, for example through a massive increase in public debt, would reduce the market price of “risk-free” long-term assets and increase inflation, both not palatable options. Thus, substantial reductions in the short-term reference rates are now unavoidable to prevent a more severe banking crisis, despite the talk emanating from the ECB, the Bank of England, and the Federal Reserve. Moreover, it is important to ensure that the long-term yields do not fall significantly, so as to maintain the increase in the term premium achieved by the reductions in the short term interest rate, and to prevent further bubbles of financial assets. The 10-year term premia have risen by more than 20 basis points in both the Eurozone and the US since August. Furthermore, the yields for the 3- and 6-months bond yields have fallen significantly since July. In the US, the 3-month Treasury bond yield has fallen by 112 basis points. As a result, the yield curves are again positively sloped and the markets, despite the central banks’ reference rates, are again willing to pay some pure term premium, clearly a positive development for the banking sector. Finally, to restore the third source of revenues to banks that have not engaged in risky behaviour and to ensure that the banking sector is willing to extend new loans, policy makers have to let the risk premium rise from its current abnormally low level. Specifically, governments and central banks should not buy financial assets to prevent a rise in the risk premium.

The increase in the risk premium will put the capital ratios of great many banks under strain. While it is often argued that large banks are well capitalized, UK major banks, for one, seem inadequately capitalized with only 4% Tier 1 non-weighted capital ratios, and a similar argument can be made relative to a few of the largest American and Eurozone banks. Since the risk spread for higher quality assets fell to near negligible amounts during the credit expansion, the repricing of risk may cause the market price of high quality assets to fall significantly more than expected because the implied asset yield for higher quality assets rises from a lower base than that for riskier assets. In fact, the market prices of investment grade corporate bonds have already fallen significantly since February, following a rise in spreads of 72 basis points. Given that Bank of International Settlement capital rules for international banks requires much lower Tier 1 weighted capital ratios for higher quality assets (only 0.6% capital allocation for AAA securities), banks with higher quality illiquid assets may paradoxically be more exposed to the repricing of the risk premium than banks with riskier assets. Alas, this issue, rather than simply lack of liquidity, may be one of the main causes of the problems besetting the English bank Northern Rock.

In conclusion, I believe the banking sector is at the origin of the current crisis, which is not a liquidity crisis but instead a revenues and capital adequacy crisis. Therefore, the crisis cannot be solved by liquidity injections by central banks, but by measures that will restore the market incentives for the banking business. Given that a large number of market participants do not know or do not agree how to quantify the extent of their losses on their illiquid assets, bank supervisors should step in and force banks to incorporate in their balance sheets their off-balance liabilities and to re-price illiquid financial assets (e.g., CDOs) using simple, but aggressive discount rules. As usual, should a bank fail to meet minimum capital ratios, the supervisor would require capital increases or in the extreme cases impose bank receivership. While these measures might affect several banks, they would restore the necessary confidence by introducing transparency about maximum bank exposure.

Finally, this crisis raises questions about the reliance of monetary policy on the short-term reference interest rate, and may lead to the ascendancy of the so-called bank capital channel hypothesis[3], a quite recent research topic within the vast transmission of monetary policy academic literature that emphasizes the effect of monetary policy on the capital of banks, and through it on economic activity.

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[1] "Financial Stability Report", April 2007, *Bank of England*, Issue No. 21
[2] Paul De Grauwe, July 10, 2007, "The eurozone is missing the point", Financial Times
[3] Van den Heuvel, S. J. (2007) "The Bank Capital Channel of Monetary Policy", *Wharton University, mimeo*. This literature focuses on the impact on bank costs of interest rate rises, whereas in this article I take the view that the important impact of monetary policy is through the reduction in the banks margins arising from the compression of the yield curve term premium.

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