Macroeconomic Impacts of Financial Regulation

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INTRODUCTION AND SUMMARY

The recent economic crisis – the deepest in the western world since World War II – revealed a number of shortcomings in financial regulation. Most countries’ regulation was based on the Basel II rules, which had not yet been implemented in the USA, however.

The crisis prompted the Basel Committee on Banking Supervision, among others, to initiate work on proposals for an amended set of rules aimed at improving the resilience of the financial sector.

The Basel Committee presented its proposals in the autumn of 2010, but the main features were already well-known from a number of consultation papers during the process. The key elements of the proposals are higher capital requirements for the banks, with a better ability to absorb losses, and the introduction of a permanent capital conservation buffer as well as building up a special countercyclical capital buffer in the event of particularly strong lending growth in the economy, cf. e.g. Harmsen (2010). Moreover, the liquidity requirements for the banks are tightened.

The purpose is to prevent inappropriate behaviour in the financial sector causing economic crises. It is hoped that higher capital requirements for the individual institutions can help to avoid government support of the financial sector in the future and to cushion the effects of economic crises.

The economic impacts of the proposed regulation have now been assessed by e.g. two Basel Committee working groups, the financial sector, central-bank staff, international organisations, and researchers. Key elements of the findings and differences between the assessments are summarised in the following with the main emphasis on the findings of the Basel Committee working groups.

The higher capital and liquidity requirements entail not only long-term benefits, but also long-term costs. In addition, the costs in the implementation phase of the new requirements should be taken into account.
It was always considered during the preparation of the proposals that the upcoming regulation could impede the banks’ willingness and ability to lend, at least in a transitional period, but also that the regulation should not be so tight that it would make it difficult for the countries involved to emerge from the crisis, let alone that it would set the stage for a new crisis.

In February 2010, the Basel Committee and the Financial Stability Board established the Macroeconomic Assessment Group, MAG, which submitted a preliminary report in August 2010 and a final report in December. The main focus of the reports is on the costs of moving from the 2009 capital and liquidity conditions to the proposed new levels according to the proposed phasing-in plan.

The MAG was chaired by Stephen Cecchetti, Economic Adviser at the Bank for International Settlements, BIS, and was otherwise composed of representatives from a number of international organisations, as well as central banks and supervisory authorities in 15 major economies in the world.

The permanent costs and benefits are assessed with focus on the report completed by the Basel Committee Long-term Economic Impact working group in August 2010. The working group was chaired by Claudio Borio, BIS, and Thomas Huertas from the UK Financial Services Authority, FSA, and otherwise composed of representatives from a number of international organisations as well as the central banks and supervisory authorities of 11 countries.

In some respects, the analyses of the two working groups are closely coordinated. A case in point is the assessments of the banks’ costs related to stronger liquidity and common equity requirements and their interest-rate responses, provided that the rules are implemented in all countries at the proposed pace.

The working groups find that the permanent benefits of the proposed tighter regulation clearly exceed the costs, but also that the costs are temporary and rather modest and occur during the phasing-in process.

These and other reports draw a clear picture. The proposals entail benefits to the whole economy in terms of fewer financial crises and thus more modest fluctuations in output and unemployment. In comparison, the costs to the whole economy of tightening the common equity requirements for the banks are primarily temporary and limited. Higher capital requirements imply a lower leverage ratio for the banks. Given the reduced risk of banking per unit of common equity, the requirement of expected return per unit will presumably fall, which will dampen the costs of the proposals.
The principal benefit in the long term is that banking crises, i.e. economic crises stemming from inappropriate behaviour in the banking system, will be rarer and less deep. In so far as a banking crisis implies lower socioeconomic activity for a prolonged period, compared to what would otherwise have been the case, or if the lower level of activity is permanent, the benefits of the proposed regulation will be even greater than the immediate costs of a crisis that are saved, cf. BIS (2010b).

However, the banks’ higher interest margins will also imply costs. The working group expects that, despite the higher capital and liquidity requirements, the banks will retain their earnings via wider interest margins, which will reduce the volume of lending in the long term. Viewed in isolation, the impact is found to be a modest, but permanent loss of activity.

The net effect of these opposite factors is assessed as clearly positive even if there is no permanent positive impact on activity of the reduced frequency and depth of banking crises. In the absence of permanent activity effects, a common equity requirement of around 10 per cent of risk-weighted assets would be optimum in the long term, and capital requirements above 16-17 per cent would even out the net gain completely. In the event of persistent negative impacts of a banking crisis, increasing capital requirements to up to 15 per cent will imply a small further gain.

The costs and benefits are assessed on the basis of various analyses and models, and the results stated constitute the median of the results across the various models, i.e. one half of the analyses produces a greater or the same effect, while the other half produces the opposite result. The modelling work is described in more detail in Angelini et al. (2011).

The calculated net effects do not take into account the long-term benefits in that the tighter regulation, including the proposed building up and breaking down of countercyclical capital buffers, will reduce the normal cyclical fluctuations in the economy. This entails a direct improvement of welfare.

Another important element of the proposal is the introduction of a genuine buffer against losses, i.e. the capital conservation buffer of 2.5 per cent of risk-weighted assets in the period 2016-18. Restrictions are imposed, as regards dividends to shareholders, on banks which have to make impairments that eat into the capital conservation buffer, and they apply until the buffer has been re-established. This reduces the need for raising capital in periods of stress, compared with today.
Moreover, it should be mentioned that the benefits will increase if the banks adjust their business models with the aim of more moderate expansion of interest margins than assumed above.

On the other hand, no account is taken of the costs that will occur if – as a consequence of the tighter regulation – certain risks are transferred, to their full extent, from the banking system to an unregulated part of the economy. If crises in the unregulated part have an impact on the whole economy that is as serious as that of crises in the banking system, this transfer, of course, entails a setback. In this connection, it should also be borne in mind that the introduction of new taxes on banking and/or financial transactions is being considered in other contexts concurrently with the proposed new regulation. The combination of the various proposals could adversely affect the functioning of the financial sector in the overall economy even though the stronger capital requirements are a step forward, viewed in isolation, cf. e.g. Rangvid (2010).

COSTS OF THE TRANSITION TO STRONGER CAPITAL AND LIQUIDITY REQUIREMENTS

The MAG reports, cf. BIS (2010a) and BIS (2010c), about the macroeconomic impact of the transition to stronger capital and liquidity requirements are based on calculations using a large number of economic models developed by the participating organisations. The models include structural models, DSGE models with and without a banking sector, and vector autoregressive models or other reduced form models.

There is a negative impact on activity since the banks are assumed to expand their interest margins, which will have a dampening effect on lending and activity. The possibility of the banks tightening their credit standards has been taken into account in some calculations, while in others differences in the gross domestic product, GDP, between a baseline scenario and a scenario with stronger capital requirements lead to variations in monetary policy.

As regards the capital requirements, the specific proposals of the Basel Committee are analysed. The period until 2015 will see the phasing-in of the increased common equity requirement from at least 2 per cent of risk-weighted assets to 4.5 per cent. The new capital conservation buffer of 2.5 per cent will be phased in from 2016 to 2018. On the basis of the capital position of the large international banks at end-2009, when the weighted average common equity amounted to 5.7 per cent of risk-weighted assets, the banks have to raise capital of at least 1.3 per cent of this amount by end-2018. It is noted in the report that the common
equity of the sample of smaller banks whose capital position was examined was, on average, higher than that of the large banks.

According to the calculations, the new requirements for the banks, to be implemented by 2018, will have a modest impact on economic growth. After 35 quarters, the level of GDP is estimated to be 0.17 per cent lower than it would otherwise have been. This corresponds to an annual decrease in economic growth by 0.03 per cent. Growth is then expected to be marginally higher than it would otherwise have been in the following years. If the banks seek to comply with the new, higher capital requirements faster, GDP is estimated to be 0.25 per cent lower than it would otherwise have been after 4½ years, implying 0.05 per cent lower annual growth, before growth begins to increase again once compliance with the new requirements has been achieved.

Since the Basel Committee's proposals regarding liquidity requirements include an observation period, the structure of the future requirements is more uncertain than that of the capital requirements. The MAG has assessed the consequences of the banks increasing their liquid assets by 25 per cent and the duration of their financing in the wholesale markets. This is estimated to entail a widening of the interest margin by 0.14 percentage point and a fall in the GDP level by 0.08 per cent relative to the baseline scenario over 4½ years.

For simultaneous implementation of the capital and liquidity requirements it is not enough just to add up the two results, as compliance with one requirement has a beneficial impact on compliance with the other.

**UNCERTAINTY OF THE FINDINGS**

As mentioned, the calculations were performed by the various MAG members using a wide range of models. The results stated above represent the median GDP effect. As regards the capital requirement, the 0.17 per cent lower median GDP level after 35 quarters masks differences ranging from no effect to a 1 per cent lower GDP level.

In any case, the results point to modest transition costs compared with the drop in GDP seen during the crisis. GDP in Denmark dropped by more than 7 per cent from the 2nd quarter of 2008 to the 2nd quarter of 2009.

Moreover, the calculations do not take all factors into account. The MAG itself states that the impact on GDP in the transitional phase will be more negative if the banks step up their efforts and achieve compliance with the new requirements ahead of schedule. This also applies if the banks choose to add a buffer.
On the other hand, the banks' strengthening of their base capital during 2010 by refraining from distributing dividend or by issuing shares will reduce the negative transitional effects. In addition, flight to safety or other equivalent adjustments of the business models may entail a smaller capital need than would otherwise have been the case.

In an OECD Working Paper, Slovik and Cournéde (2011) arrive at more negative transitional effects of the new capital requirements compared with the MAG findings. According to their calculations, annual growth is estimated to be around 0.05-0.15 per cent lower than it would otherwise have been. The principal difference relative to MAG is that they assume that the banks will maintain the current excess capital adequacy in relation to the existing minimum requirements. This assumption is not necessarily valid. The current excess capital adequacy reflects, among other things, that the banks know that stronger capital requirements are in the pipeline, so they have begun the process of compliance in advance of the raising of the existing minimum requirements.

OTHER ASSESSMENTS

In June 2010, the Institute of International Finance, IIF, issued a report, cf. IIF (2010), with a considerably more negative assessment of the costs of the proposed regulation, compared with the results of the Basel Committee working groups. In the event of a long phasing-in period of 10 years, the regulation proposals tabled at the time are found to dampen annual GDP growth by 0.3 per cent on average. The calculations were made for the USA, the euro area and Japan, and since the banks play a larger role as a source of corporate financing in Europe than in the USA and Japan, Europe is exposed to the most negative impact, i.e. 0.5 per cent lower growth for 10 years. A phasing-in period of 5 years would double the annual reduction of growth. The IIF has made calculations based on slightly stricter regulation requirements than those proposed, but on a comparable basis the damper on activity is assessed to be eight times the MAG estimate, cf. BIS (2010a, p. 4).

The primary reason for this very substantial difference is that the IIF predicts that capital will be in scarce supply. Consequently, the costs of raising one additional unit of capital will increase in step with the capital need, entailing a growing need to raise lending rates. The demand for loans is assumed to be sensitive to interest rates, and the lower lending is expected to have a considerable economic impact, given the assumption that lower lending growth implies lower GDP growth.

Others have criticised the assumption of the working groups that the return on capital is not reduced in case of an increase in the volume of
capital. The key argument is that the higher a bank’s common equity for a given asset composition, the lower the risk on banking. This will reduce investors’ required expected return on equity when buying bank shares. This Modigliani-Miller proposition means that the banks’ weighted financing costs are not dependent on the composition of their financing.

As opposed to most other types of businesses, banks have very little common equity relative to their assets, cf. e.g. Kjeldsen (2004). Consequently, the banks are dependent on other sources of financing to make up the rest, typically deposits, bond issuance, etc. A number of studies point out that banks, relative to other types of businesses, have access to particularly inexpensive financing, because the authorities have in many cases de facto issued guarantees against losses for depositors and often bond holders as well, should a bank land in difficulties, cf. e.g. Miller (1995), Admati et al. (2010) and Juks (2010). In that case, depositors and bond holders will demand a lower return on funding to banks compared with buying e.g. corporate bonds. On the other hand, the implied guarantee means that there are real costs associated with compliance with higher common equity requirements, given the declining share of financing with implied government support.

Miles et al. (2011) try to calculate the optimum capital requirement for banks, including key elements of the Modigliani-Miller theorem and taking into account the expected costs of banking crises. Their analysis also includes the assumption that outliers occur more frequently than in a normal distribution with the same median and variance. They find that the optimum common equity requirement is 16-20 per cent of risk-weighted assets, i.e. roughly twice as high as the proposed requirement and also somewhat higher than that calculated by the Basel Committee Long-term Economic Impact working group, assuming a permanent, negative impact of banking crises.

CONCLUSION

The various studies do not agree on the costs and benefits, neither in the long term nor the short term, of the proposed amendments to the capital and liquidity requirements for banks.

The analysis by international banks does not include an assessment of the possible long-term benefits to the economy from tighter regulation, but they find that there are substantial costs to the economy in the period of phasing in the tighter requirements.

The authors of other studies consider both the potential long-term net benefits and the transitional costs.
Firstly, the Basel Committee working groups find that tighter regulation has a positive long-term economic impact, including that the capital requirements should optimally be slightly higher than proposed. Secondly, the estimated transitional costs for the banks’ adjustment to the tighter requirements should also be taken into consideration. The working group in question finds that the phasing-in does involve economic costs, but that they are negligible, i.e. a decline in GDP growth of 0.03 per cent for a few years. Other studies point to larger transitional costs. Finally, some academic studies find that there are considerable economic benefits to be gained from tighter regulation, and that the capital requirements should optimally be considerably higher than proposed.

Against the background of the various studies and experience from the financial crisis, the conclusion is that the regulation proposals will have a positive economic impact in the slightly longer term and that the transitional costs are limited. Slightly higher capital requirements than those proposed would probably be even better.

One risk of tighter regulation is that there will be a tendency to transfer banking activities to an unregulated shadow banking sector. However, since the shadow sector is not covered by guarantee schemes, its access to financing is limited, but in any case it is important for the authorities to ensure that such development is contained.

**LITERATURE**


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