

## Editorial

# Why banks hold capital in excess of regulatory requirements: The role of market discipline

In June 2004, the proposed amendments to the Capital Accord (Basel II) were agreed and are scheduled to take effect in January 2005. An overriding objective of Basel II is to allow market forces to play a more important role in setting capital standards in order to enhance the risk sensitivity of banks' capital allocation. In G10 countries, however, banks already hold capital significantly in excess of regulatory capital requirements. If an important objective of Basel II is to make a bank's capital more risk sensitive, it appears that banks may already be meeting this objective and that reform of international capital standards may be misguided. This essay suggests that excess capital levels in the banking sector may be due to market failures and inadequate regulation. Indeed, it is argued that excessive reliance on market discipline may result in inefficiencies in the banking sector and may also pose a threat to financial stability. What are the implications for regulatory reform?

### **EXCESSIVE RISK-TAKING BY BANKS GIVES A ROLE FOR MINIMUM CAPITAL STANDARDS**

The experience of the Basel Accord demonstrates that regulators have accepted that an important way of building confidence in the banking sector is to require banks to hold minimum levels of capital against their risk-based assets. Bank capital requirements are based on the notion that

banks have an incentive to underprice financial risk and therefore create too much of it in financial markets. The economic costs incurred by banks when they underprice risk are far less than the social cost such risk poses for society at large, as demonstrated by recent banking crises.

In the 1970s and early 1980s, most countries did not have minimum capital requirements for banks. After several banking and financial crises in the early 1980s, the UK and USA initiated the drive for minimum capital standards by adopting a bilateral capital agreement in 1985 that provided the basis for the G10 country negotiations that eventually led to the 1988 Basel Capital Accord. The Accord established the first minimum international capital standards for banks operating in G10 countries. Its 8 per cent minimum capital standard consisted of 4 per cent tier one capital (equity and reserves) and 4 per cent tier two capital (subordinated debt and general provisions). This capital standard was much higher than the capital maintained by most banks prior to the Accord's adoption and resulted in a dramatic increase in capital levels for most banking systems. Although the Accord was not binding as international law, its 8 per cent capital ratio became an international benchmark that has been implemented into the national law and administrative code of over 100 countries. The binding effect of the Accord under national law resulted in

increased capital levels for most banks in G10 countries, especially for US banks in the aftermath of the savings and loan crisis. Indeed, the Accord has been credited with increasing the capitalisation of the banking sectors of most countries and inducing banks to improve their risk-pricing practices.

### **Build-up of excess capital**

In the 1990s and early 2000s, however, banks in G10 countries have consistently held capital that far exceeds the regulatory minimum requirement. For example, US bank holding companies have on average held between 12 and 13 per cent capital throughout the 1990s, which was significantly in excess of US requirements.<sup>1</sup> Similarly, UK banks and building societies have held between 12 and 14 per cent throughout the 1990s and 2000s.<sup>2</sup> A common explanation for this has been that excess capital acts as a buffer over the regulatory minimum. Banks have an incentive to hold such a buffer because capital adjustments in response to fluctuations in their capital ratios are costly, so they want to avoid being close to the minimum regulatory constraint. According to this explanation — despite the fact that, strictly speaking, bank capital exceeds regulatory requirements — capital requirements are indirectly binding.

### **Excess capital driven by market forces**

This view has been challenged, however, by new evidence that suggests bank capital is increasingly determined by market forces rather than by regulatory requirements. In particular, Flannery and Rangan found that two-thirds of the increase in capital levels in the USA during the 1990s can be explained by market forces.<sup>3</sup> The increasing role of market forces in influencing bank capital levels has been attributed to the reduction

in the implicit government guarantee that central banks traditionally provided through the lender-of-last-resort function. The market was also assisted by the 1988 Basel Accord that provided a transparent measure of bank risk, which facilitated a comparison of risk profiles among institutions. It can also be argued that tightened capital adequacy regulation has not played a significant role in the increase in capital ratios because many internationally-active banks began holding excess capital in the early 1980s in response to the sovereign debt crisis, while the 1988 Basel Accord was only implemented between 1990 and 1992.<sup>4</sup>

### **A PUZZLE**

If the market has now replaced the regulator in imposing capital requirements for banks, regulation seems obsolete. This is in stark contrast with the traditional argument that regulation is necessary because banks have an insufficient incentive to hold a socially efficient amount of capital, which would imply that optimal regulation should always be binding — directly or indirectly. In other words, given that the market cannot internalise external factors from banking failures, why does the market seem to require more capital than the regulator?

### **Explanation 1: Regulatory capital requirements are set too low**

If, for whatever reason, current regulatory levels are below socially optimal levels, then it would be no surprise if the market required a higher level of capital. In fact, the 8 per cent capital requirements of Basel I were motivated by a regulatory concern for the low levels of capital held by most banks in the 1980s, rather than by an estimate of the socially optimal level of capital that a bank should hold.<sup>5</sup> It should, therefore, be no surprise if the current level of

minimum capital requirements is not socially optimal.

**Explanation 2: Market capital requirements exceed the socially optimal level**

The alternative explanation is that regulators have set the right level of capital requirements but the market has coordinated on standards for prudent banks that exceed both the true economic level of capital and the socially optimal level of capital. Even though these standards are excessive in terms of economic capital, they are rational for banks to follow because otherwise they would be punished by the market. For example, uninsured depositors could withdraw their funds; or banks may not be able to access certain markets any more if their capital level falls short of their peers. Such standards do exist, for instance in the wholesale lending market.<sup>6</sup> Market standards arise, for example, through rating agencies that base their rating decisions on a bank's capital because banks need sufficient ratings in order to access certain markets. Indeed, there is some empirical evidence for such market standards — capital held by a specific bank is influenced by the capital held by other banks.<sup>7</sup> Banks may also want to hold more capital than their true economic or social capital requires in order to signal financial health to the market. This explanation implies that because markets force banks to hold a socially excessive amount of capital they do not operate efficiently.

**Policy implications of excess capital: Increase capital requirements**

If one is inclined to follow the first explanation, the recommendations for regulations are simple: capital requirements are set too low and should consequently be increased. This would imply that substantial increases in capital requirements are in order. Since banks do not internalise social

costs, regulation has to be set above current levels. This would imply minimum capital requirements that are larger than the 10 to 14 per cent currently held in G10 countries.

**No role for regulation?**

On the other hand, if one believes in the second explanation, one may be tempted to say that regulation has no role any more since the market itself already requires capital levels that ensure a high level of stability. The second explanation, however, implies that the level of market requirements is too large (since it exceeds social capital) and hence the role of the financial sector in providing efficient financing is impeded. Moreover, since market standards can easily change, relying on them may induce additional instability. For example, in a downturn, market participants may start to require higher capital holdings, thus reinforcing the crisis. Regulation is thus still needed.

**BASEL II STRENGTHENS MARKET FORCES**

Basel II contains three mutually reinforcing pillars which comprise the framework for assessing capital adequacy. The first pillar is the minimum regulatory capital charge that includes both the standardised and advanced approaches, while the second pillar focuses on the process of supervisory review. The third pillar utilises market discipline to reinforce capital regulation and other supervisory efforts by proposing widespread disclosure standards that add more transparency to the risk and capital position of banks. This pillar provides a framework that substantially increases the role of market discipline in maintaining capital standards.

**Further policy implications: Limit and coordinate market forces**

Explanation 2 above suggests that market forces are undesirable because they can

require excessive levels of capital that impose an unnecessary burden on the economy and induce additional financial instability during a market downturn (pro-cyclicality problem). The third pillar's emphasis on market discipline may be counterproductive because it further strengthens market forces and thus increases inefficiencies. Rather, regulation should try to influence and constrain market forces by limiting sources of market failure. One way this can be done is by adopting informal targets of capital adequacy that do not simply focus on minimum standards, but also seek to identify optimal levels of capital for different types of banks. Also, the regulator could adopt two-sided targets: for example, by stating that it would be undesirable to exceed substantially the minimum capital standard; or that capital should be kept within a particular range.<sup>8</sup> The regulator should try to induce the market to coordinate on more efficient and moderate levels of capital requirements and also reduce fluctuations in market standards. Alternatively, a more drastic measure would be to set maximum capital requirements, which would directly limit the potential for excessive capital but also confine fluctuations in market standards to a defined range.

## CONCLUSIONS

Spurred by recent empirical work, I have examined the consequences of bank capital which are largely driven by market forces for financial regulation. I have argued that in view of banks holding excess capital either capital requirements are too low or market forces require banks to hold excessive capital and induce additional instability. In either case, the emphasis of Basel II on more market-based regulation is misguided, if not counterproductive. Pronounced regulatory measures are needed to restore efficiency. Further

research should focus on the reasons why banks hold excess capital and how this is pivotal to regulation.

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## REFERENCES

- (1) Flannery, M. J. and Rangan, K. P. (2002) 'Market forces at work in the banking industry: Evidence from the capital buildup of the 1990s', <http://ssrn.com/abstract=302138>.
- (2) Alfon, I., Argimon, I. and Bascuñana-Ambros, P. (2004) 'What determines how much capital is held by UK banks and building societies?', FSA Occasional Papers in Financial Regulation, <http://www.fsa.gov.uk/pubs/occpapers/op22.pdf>.
- (3) See ref. 1 above. The remaining third is explained by passive factors, such as an increase in capital ratios through increased earnings and market valuation.
- (4) The view of excess capital being largely driven in order to have a buffer over regulatory capital has also been challenged on the grounds that such a cushion would be too large to be explained by the data. For example, see Gan, J. (2001) 'Financing choices of banks: The role of non-binding capital requirements', available at [www.bis.org/bcbs/events/rtf04gan.pdf](http://www.bis.org/bcbs/events/rtf04gan.pdf).
- (5) This is due to the fact that no widely accepted models of the optimal level of regulation exist.
- (6) Jackson, P., Perraudin, W. and Saporta, V. (2001) 'Regulatory and economic solvency standards for internationally active banks', Bank of England, London.
- (7) See ref. 2 above.
- (8) Interestingly, similar concepts are used by central banks in combating inflation: rather than aiming at keeping inflation below a certain level, several central banks aim at holding inflation within a certain range. For example, the Bank of England Monetary Policy Committee has a symmetrical inflation target of 2 per cent.