

The background of the page is a black and white photograph of a bridge, showing its structural beams and supports. The image is split horizontally, with the top half showing the bridge's upper structure and the bottom half showing its lower structure.

ACCOUNTANCY FUTURES

# Basel III and SMEs: getting the trade-off right

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The provisions of Basel III, the global framework governing the regulation of bank capital, liquidity and leverage, will, for the coming years, determine the supply and cost of capital to businesses globally.

The financial crisis presented policymakers with a choice between promoting business growth and safeguarding financial stability. This paper discusses how Basel III can be adapted to reflect the appropriate trade-off between the two.

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## Introduction

Basel III is the global framework governing the regulation of bank capital, liquidity and leverage agreed in the aftermath of the global financial crisis of 2008–9. Its provisions will, for the coming years, determine the banks' cost of capital and therefore the cost and supply of capital to businesses around the world.

In the summer of 2011, ACCA published *Basel III and SMEs: Framing the Debate*, which discussed the incomplete evidence on the effect of Basel III on SMEs' access to finance (ACCA 2011a). Our conclusion then was that these effects could be disproportionate and that regulators' understanding of these, including the all-important behavioural changes to banks' business models, was woefully inadequate.

In December 2011, ACCA published *CRD IV and Small Businesses: Revisiting the Evidence in Europe* (ACCA 2011b), which considered the European Commission's new proposals for the Fourth Capital Requirements Directive (CRD IV), the EU legislative package implementing Basel III in Europe. The findings reinforced previous evidence, and demonstrated how the forced deleveraging of European banks is likely to affect SME lending.

Yet, as we stressed in both previous papers, there is no doubt of the need to ensure financial stability, or of the substantial benefits it will bring to SMEs. Even business associations are willing to concede that some sacrifice of SME growth can be justified in the interests of financial stability. This final paper tackles the most important question of all: how to find the appropriate trade-off between the two.

## The errors of risk weighting

The focus of Basel III, and indeed of all capital regulation so far, is not primarily a bank's balance sheet but the sum of its risk-weighted assets. Capital adequacy rules assign a risk weighting to each of a bank's assets that is meant to be proportionate to the credit and market risk that the asset in question represents. Under Basel III, loans to SMEs are assigned a relatively high risk weighting, inherited from Basel II, which should, when combined with rising capital requirements and turbulent capital markets, result in a disproportionately high cost of capital for banks when lending to such businesses and a gradual shift of their entire business models away from SME lending. Moreover, the evidence reviewed by ACCA (2011b) suggests that capital set aside against SME loans has, in the past, significantly exceeded any losses from defaults.

Basel's approach to risk weighting is based on a significant misconception regarding the purpose of capital regulation. Risk weightings incorporate rough estimates of credit, market and operational risk (Blundell-Wignall and Atkinson 2010). It is not, however, the purpose of capital regulation to protect individual banks from bad debt, poor investments or flawed internal controls. Financial institutions have substantial risk-management functions and governance arrangements charged with this task and can generally monitor their exposure better and more regularly than regulators can. Regulators should, of course, review these functions and arrangements and will no doubt find much in need of improvement. But the purpose of capital regulation is to protect the wider financial system and the taxpayer from the banks' flawed incentives.

Capital regulation, like all regulation, is only justified insofar as it addresses market failure. In the case of financial intermediaries it has been amply demonstrated by the financial crisis of 2008–9 that negative externalities do exist and that avoiding these does justify some kind of capital regulation. Through their actions, financial intermediaries expose their counterparties to systemic risk without bearing the social cost of this by-product of their activities. The result is an excessive accumulation of systemic risk, which is the proper province of capital regulation.

This distinction means that inferring 'optimal' risk weights from past or forecast default rates is a deeply flawed methodology because it conflates risks that should be the target of regulation with risks that should not. Both internal risk models (whereby the banks assign their own risk weightings according to internal risk calculations) and standardised risk coefficients (provided by Basel and the implementing regulators) are based on this principle and are thus equally problematic.

To illustrate: for a bank, giving a three-year €1m loan to an SME is doubtless much riskier than buying €1m worth of newly issued three-year AAA-rated government bonds. Statistically, some of the SME creditor population must default in a given year, while the AAA-rated sovereign is certain, for all intents and purposes, to survive and pay off its creditors. Hence a narrow view of risk will rightly consider the SME to warrant a much greater capital allocation.

In fact, there is more to this story than this narrow view. Unlike the SME loan, the bond can be posted as collateral many times over in the wider financial system (2.4 times on average, based on the estimated global velocity of collateral), enabling a disproportionate volume of transactions (Singh 2011).<sup>1</sup> Its price will correlate strongly with those of a host of other assets to which the bank is exposed, and can be subject to unstable feedback loops involving these (BIS 2011); and because bonds are publicly traded, its value will change constantly and may do so at any instant. To be fair, SME loans are not free from systemic influences (Direr 2002), particularly in sectors that rely heavily on trade credit. But the two assets' systemic footprints (to borrow from the literature on another negative externality) hardly compare.

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1. Central banks have been known to accept SME debt as collateral from banks as part of their liquidity operations, but that is hardly the norm.

Put another way, nearly all the risk involved in an SME loan is borne by the lender as straightforward credit risk, and most of the rest is borne by the business owners as straightforward financial risk. In the case of the bond, however, the risks are more diverse and diffuse, and in buying, holding or trading the bond the bank has internalised only a tiny amount of these.<sup>2</sup>

This begs the question of how risk weightings can be corrected to reflect the kinds of risk that Basel should be targeting. Given the sheer amount of political will invested in it, a wholesale review of Basel III is most unlikely, but a recalibration within the current framework may be possible. In fact, the Basel Committee has already demonstrated one approach to this in its search for 'global systemically important financial institutions' (BCBS 2011). That assessment set out to identify institutions that are Too Big or Too Interconnected To Fail through a set of criteria: cross-jurisdictional activity, size, substitutability and complexity. A similar approach can be used to calibrate the existing risk weights, by asking the following questions.

- To what extent are assets traded between financial institutions, especially internationally?
- What share of the financial institution's assets and revenues does the asset class represent?
- What share of total activity in the asset class does this institution represent?
- How complex is the asset in question?

This process could be used to derive systemic risk weights complementary to the credit, operational and market-risk weights already employed by Basel III. This would result in weights that are not only more conducive to SME lending but also more consistent with the purpose of capital regulation.

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2. In theory, tying the bank's incentives to its share price and its reputational capital as a counterparty can help internalise some additional risks involved in lending to the sovereign, such as liquidity and tail risk, but a lot of the risk still remains unaccounted for. Moreover, relying on market scrutiny to control risk has clearly not been successful in the past for reasons that merit a further, lengthy discussion.

## Liquidity pitfalls

It is hard to argue with the principle of liquidity regulation, or with the emphasis it has received in the Basel III framework. As Vasquez and Federico (2012) point out in their review of bank failures among more than 11,000 banks in the US and Europe between 2001 and 2009, banks with weaker structural liquidity pre-crisis were more likely to fail during the crisis of 2008–9. Therefore, some manner of regulation of banks' funding structures is essential.

Basel III deals with liquidity risk in a manner analogous to its approach to capital regulation: by assigning liquidity risk weightings to assets and liabilities according to their relative liquidity and requiring that financial institutions target two new indicators, the Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR).

The LCR is the ratio of a bank's net liquidity outflows during a theoretical 30-day period of acute stress, divided by its stock of 'high-quality' liquid assets. Both the quality of liquid assets and the probable outflows will be the product of statistical modelling of liquidity crises. The NSFR, on the other hand, is the ratio of Net Stable Funding (ie customer deposits, long-term wholesale funding, and equity) to assets, where funding sources are weighted by their respective Stable Funding Factors reflecting the probability of mass withdrawal, and assets are similarly weighted by coefficients reflecting the frequency with which they might need to be refinanced. The shortcomings of both instruments with regard to SME lending are substantial and are examined in detail in ACCA (2011b).

More generally, however, de la Torre and Ize (2009) correctly point out that penalising maturity mismatches is a poor way of dealing with systemic liquidity risks. If the problem is the excessive reliance on short-term wholesale funding (and it is), then allowing banks to persist with this practice as long as they can reduce the maturity of their assets accordingly seems a woefully inadequate response. The liquidity provisions of Basel III are applying a symmetrical solution to an asymmetrical problem, and could severely curtail the banks' capacity for long-term business funding.

With regard to SME lending, it is a fact of life that funding for small businesses can never create very liquid assets – SME loans are not as readily tradable and SMEs' needs are not fluid enough. While this does not represent an aberration in any way, it does mean that SME loans would be an easy target for banks seeking to match the maturities of assets and liabilities.

The answer is to restrict liquidity regulation to a more appropriate target: short-term wholesale funding. The result would be a compromise that would maintain the weightings already established for liabilities but do away with those applying to assets, or at least to traditional loans.

## Basel blind spots

One final element in reviewing the trade-offs imposed by Basel III is to consider Basel's blind spots: whether there are important institutions or risks that it fails to take properly into account. In ACCA's view the most important Basel blind spots are its failure to account for the great diversity of financial institutions and their capital structures, and the diversity of risk.

Vasquez and Federico (2012) examine the first of these blind spots, using a very substantial sample of over 10,000 banks to isolate the determinants of bank failures in Europe and the US and compare them with the key indicators adopted by Basel. Their findings suggest that the Basel III provisions are a poor fit to the actual causes of failure among credit cooperatives and savings banks, insofar as these contribute to systemic risk at all.

Among cooperatives, Vasquez and Federico (2012) find that those engaged in non-traditional activities and possibly those pursuing very high returns on assets (ROA) are more likely to fail. This sector is unique in both of these respects. Cooperatives are also unique in that they participate in credit bubbles to a much lesser extent than other types of lender: prior GDP growth contributes less to their chances of failure, and they are also unaffected by past low interest rates. While some of these findings require further investigation, they do suggest that a target leverage ratio, which would force institutions to aim for higher ROA, might not be a suitable tool in the case of cooperatives and, indeed, that further regulation of this sector might not be needed at all.

Among savings banks, higher NSFR values (an explicit aim of Basel III) tend to be associated with a higher probability of failure, possibly suggesting that an over-reliance on short-term lending is problematic in this sector. Savings banks are also more prone than other lenders to failure following a prolonged period of high growth, which might suggest that the reasons for the failure of such institutions might be much more mundane than Basel assumes. At any rate, their ability to cause contagion among other intermediaries is not substantial.

Regulation of these two sectors is, as discussed in ACCA (2011a) and ACCA (2011b), very important. SMEs in many countries rely disproportionately on such intermediaries, and would be significantly affected by an unwarranted rise in borrowing costs.

Perhaps more important is the question of the kind of risk from which Basel can actually protect financial institutions and the system in general. Perotti et al. (2011) argue that capital regulation has a blind spot when it comes to tail risk. This is commonly defined as the risk that 'the possibility that an investment will move more than three standard deviations from the mean is greater than what is shown by a normal distribution'. In a normal distribution (and some risk models used by financial institutions) such a move is assumed to have a probability of 0.03% (Investopedia 2012), but in financial crises such nominally rare events actually become more common.

Perotti et al. (2011) explain that, because tail risk events can wipe out almost any level of capital set aside against the associated assets, most of the risk involved is never internalised by the financial institutions involved. In fact, banks faced with opportunities to take lucrative tail risks can choose to build up additional capital 'cushions' whose sole purpose is to avoid market and regulatory scrutiny, making capital levels very misleading. It is worth noting that a number of countries have already put in place such capital 'cushions' above and beyond what is called for by Basel III. The result may well be an even higher exposure to tail risk.

Even more worrying is the review of the last 20 years of capital regulation by Slovik (2011), which considers how the behaviour and business models of global banks have so far been affected by the Basel and Basel II frameworks. The ratio of banks' risk-weighted assets (RWA), which are effectively penalised by Basel, to the banks' total balance sheets fell very steadily from 66% in 1991 to 33% in 2008. During this time, their combined Tier 1 capital ratio remained fairly constant, even rising mildly. Yet all the while the global financial system clearly became much more fragile, suggesting that, partly because of the problem highlighted in Chapter 1 above, risk-weighted assets do not capture any truly relevant measure of risk. In fact, in a recent review of bank share price performance from 2004 to 2011, Das and Sy (2012) claim that:

'RWA do not, in general, predict market measures of risk although there is evidence of a positive relationship before the US crisis which becomes negative afterwards'.

Slovik (2011) demonstrates that, between 1991 and 2007–8, loans became an ever-diminishing part of the banks' balance sheets, reflecting the incentives provided by capital regulation (see Table 3.1).

Banks at the centre of the crisis lacked strong incentives to devote adequate attention to due diligence of individual mortgage loans because their main profit margins were derived from securitisation of loans rather than from a prudent credit-risk assessment of individual loans. A major focus of systemically important banks has been to maximise profits by engineering unconventional assets, rather than making sure that each loan individually is worth the credit risk. Risk-weighted regulation shifts banks' attention and resources away from conventional lending. (Slovik 2011)

These findings suggest that Basel III is not optimally suited to the risks facing the global financial system. In many ways, capital regulation alone is oblivious to the realities of lending to SMEs and gives banks incentives to avoid conventional lending altogether. It is therefore important for global regulators to resist complacency and devise further means, outside the framework of Basel III, of monitoring tail risk, as well as to rethink the scope of Basel III and ensure that it applies only to those sectors that stand to benefit from its provisions.

**Table 3.1: Total loans as % of total assets for selected banks**

	1990	1995	2000	2005	2007	2008	2009	2010
Deutsche Bank	85	73	53	17	11	15	21	27
UBS	78	61	26	15	18	21	27	22
BNP Paribas	77	73	37	28	31	28	36	38
Barclays	78	68	64	33	32	25	34	32
Bank of America	58	62	61	44	51	51	40	42

Source: Slovik (2011)



## Conclusions and recommendations

This is the third and final paper of a series on Basel III and its effects on lending to SMEs, and it considers the most important question of all: the appropriate trade-off between SME growth and financial stability.

The findings suggest that it is both possible and necessary to recalibrate Basel III so as to mitigate the worst of its effects on SMEs by simply aligning the regulatory framework with its proper purpose: containing systemic risk and the negative externalities involved in financial activity. The key is in recognising which elements of financial institutions' activity truly contribute to these and ensuring that these are penalised, instead of penalising risks that are properly internalised by financial institutions.

Nonetheless, it is also important to realise the limitations of Basel III: there are sectors to which it is not well adapted, and important risks that it cannot accommodate. In fact, many of the same features that make the framework hostile to SME lending also make it oblivious to true risk.

Clearly regulators and governments around the world need to take a step back and consider the current framework for capital and liquidity regulation. A wholesale review of Basel III may not be possible any time soon, but if policymakers can, for now, focus their energies on perfecting the trade-off between SME growth and financial stability, a substantial share of the global economy will reap significant rewards without endangering any other economic activity.

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