Summary

Capital requirements for banks: what is the optimal combination of regulation, supervision and market discipline?

In this article, we place the developments in the field of changing capital requirements and risk models in the context of the Basel Framework of Capital Accords and discuss the possibilities for improving the combination of regulation, supervision and market discipline. We then draw a number of conclusions and make some recommendations.

Firstly, we wish to draw attention to the dimensions of the stricter requirements, potential effects on economic growth and the impact on the level playing field with other providers. We support the direction of higher buffers, which make banks more secure, however the banks are faced with many changes, not all of which are mutually consistent. We argue for an integrated approach, in which requirements are seen from a holistic point of view and regulation and supervision will be fine-tuned where necessary. Examples we give in this article that call for such an approach are the combination of Basel and TLAC, and the impact of stricter capital requirements and new requirements for risk models. What does this mean for the capacity to provide credit by using the bank balance sheet? In any case, in the future we expect more disintermediation. In the interest of a level playing field and stability of the financial system it is important to know which shifts take place and why. We would welcome more research about this topic.

Secondly, in line with this, the capital regulations have become extremely complex and therefore less transparent. The disciplinary effect of the market is thus less apparent. We think that we need to take a step backwards with respect to complexity in order to ensure the objective of a safe financial system. Otherwise, there is a danger that arbitrage will seriously undermine the effectiveness of the system. A combination of simple requirements and more risk-sensitive requirements will probably be the most effective solution. So, the leverage ratio, floors and standard models should function as a back-stop for model risk and in addition to the risk-sensitive models, and alongside the other measures to ensure adequate buffers at the banks and therefore their stability.

Thirdly, the current Basel proposals for capital floors and adjustment of the Standard Approach will in our view put excessive pressure on mortgage lending, lending to SMEs and specialised lending, since risk premiums and the corresponding capital requirements would have to be raised significantly. We argue for proper calibration of these proposals, that takes account of demonstrable information on credit risks and differences between countries in areas such as bankruptcy regulations and the position of banks against borrowers with respect to execution. Demonstrable variations in credit risk itself as a result of other market conditions cannot be ignored. Of course, we also support the gradual harmonisation of bankruptcy legislation between countries and for instance less ambiguous definitions of default.

Fourthly, the introduction of capital floors must avoid a situation in which the requirement encourages banks to make decisions based on the regulatory requirement rather than their own assessment of risk. The banks should always make their best estimate of risk themselves. They bear this responsibility. Views with respect to risk, the quality of the risk management at a bank, the quality of a portfolio, moreover vary from one institution to another. Heterogeneity strengthens the financial system. Alertness is however needed with respect to extreme outcomes, and there need to be good reasons why these occur. And certain extremes are simply not acceptable. We have to remove these extremes while avoiding a situation in which everything is the same: we must not allow this to result in a 'one size fits all' approach.

Fifthly, we suggest that the Capital Floors should be placed in Pillar 2 instead of in Pillar 1, as an extra safeguard for a supervisor and similar to the important role of stress test information. In Pillar 2, the instrument can be applied in a way that is appropriate to the situation. Placing it in Pillar 1, the legal requirement, threatens to make the capital requirements excessively inflexible and that makes it difficult to determine the correct level: either the floor will be too low and therefore have no effect, or it will be too high and thus make the risk-sensitive approach practically irrelevant. Of course in this structure there will have to be benchmarking of how the supervisors apply this requirement. Too much emphasis on Pillar 1 will any case mean that the balance between the three Basel pillars will be weakened.

Lastly, we conclude that transparency regarding the capital positions of individual banks could be improved and could strengthen the Basel supervisory framework (Pillars 2 and 3). For this, we discuss various perspectives. For example, by requesting supervisors to explain the system and methodology that they use when arriving at decisions at individual bank level. The ECB could moreover consider publication of individual minimum capital levels and findings.

Capital requirements for banks: what is the optimal combination of regulation, supervision and market discipline?

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Summary

In this article, we place the developments with respect to capital requirements and risk models in the context of the Basel framework of Capital Accords and discuss possibilities for improving the combination of regulation, supervision and market discipline. We argue that requirements need to be seen from a holistic point of view and that the regulatory framework needs to be fine-tuned and simplified. A combination of simple requirements and more risk-sensitive requirements will probably be the most effective solution. In any case, a situation in which banks set policy on the basis of regulatory requirements rather than their own risk assessment should be avoided. Lastly, we conclude that there could be greater transparency with respect to the capital positions of banks. For instance, the European Central Bank could consider publication of individual minimum capital levels.

Introduction

In December 2014, the Basel Committee brought out two consultations on Capital Floors and the Standard Approach. Both led to fierce responses from the banks.[2] What would be the purpose of the banks' internal risk models if these proposals were adopted? What would this solve? Is it not possible to improve the banks' internal risk models? At what level would the capital floors and risk weights be set and what would this mean for, for instance, mortgage portfolios, SME finance and specialised lending such as Trade and Commodity Finance? How do these plans add up with the other measures that already increase the capital to be held by banks? Many questions, and as yet no answers.

We have to wait for the Basel Committee to publish its more detailed proposals before we will get any answers. In view of the strong reactions, the Committee might publish a second consultation in December or January and another Quantitative Impact Study. The calibration of the capital floors will

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[2] See for instance the reactions of the International Institute of Finance, the European Banking Federation and the Dutch Banking Association to the consultations. These can be downloaded at the websites of these organisations.

follow in the course of 2016, when the proposals of the European Banking Authority will also be revealed. In March, the EBA published a discussion paper on risk models to also get the views of others.[3] In the meantime, the ECB is looking at the bank models and is setting strict requirements for the individual capital positions of banks. Moreover, there are scores of other reforms to banking supervision being implemented, such as the further phasing-in of the Basel 3 requirements, the direct supervision of the ECB in the Banking Union, the formation of a Single Resolution Board for the winding-up of large banks, bail in, the introduction of additional buffers for systemic banks and the tightening of the leverage ratio.

This article places the Basel proposals for capital floors and risk models in this broader context. The central questions we pose are: 1) what constitutes the Basel framework of Capital Accords, 2) what improvements can still be made to the combination of regulation, supervision and market discipline, and 3) how can the new proposals fit best within this combination? Our aim is to contribute to the discussion by showing how these issues are seen from the point of view of a large bank.

While the Basel proposals for capital floors and the Standard Approach were unexpected, effectively they did not come out of nowhere. Supervisors, regulators and politicians have already spent more than three years discussing how the risk models of the banks could be made simpler, more objective and more transparent. An important objective is to limit the differences in the results of risk models and thus achieve greater uniformity. We include this aspect in our analysis. We will also discuss several views regarding the added value and the limitations of this simplification of requirements, of increasing standardisation and of greater transparency regarding the meeting of requirements by individual banks.

The structure of this article is as follows. Section 1 discusses the system of capital requirements and the more prudential supervision of the banks. In section 2, we discuss the current debate on capital market regulation and potential improvements. Lastly, we list our conclusions and make some recommendations.

[3] See http://www.eba.europa.eu/regulation-and-policy/credit-risk/discussion-paper-on-the-future-of-the-irb-approach.

1. The system of capital requirements and banking supervision

Purpose and design of the system of capital requirements

The primary aim of capital requirements and the prudential supervision of the banks is stability. For this, it is necessary for banks to hold sufficient capital reserves and exercise proper risk management. The banks are primarily responsible for this themselves, but a proper framework for supervision and regulation are essential preconditions. The way in which the system is designed must moreover be transparent, allow room for competition, growth, innovation and – as far as possible – provide a level playing field.

The Basel Committee, which has formulated supervisory standards and guidelines since 1974 that serve as guides to regulators and supervisors worldwide, has an important role in the supervisory framework. The Committee's conclusions have no legal status, but they are seriously considered when legislators and supervisors around the world assess and adjust capital regulation when necessary. In addition, the various international and national regulators and supervisory agencies are leading players. In Europe for instance, these include the European Commission, the Council and the European Parliament and the European Central Bank – certainly for the biggest banks – just as for instance the European Banking Authority. In the United States, the Senate, the Securities and Exchange Commission and so on. Since 2012, we have the Financial Stability Board at global level, which (in terms of priorities and direction) is closely related the G20. So, a significant number of players.

To illustrate this point: TLAC ('Total Loss Absorbing Capacity') is an initiative of the G20 and the FSB, Europe has the MREL ('Minimum Requirement for Own Funds and Eligible Liabilities') guideline, the EBA is taking the initiative in the discussion on the future of Internal Rating Based models, Basel is in the lead with (imminent) proposals on new Capital Floors and the Standard Approach, and regulators and supervisors have their own roles in the application of the standards and guidelines. The requirements for the leverage ratios of banks and the additional capital requirements for systemic banks apply for example at different levels internationally, due to national add-ons. Furthermore, the Single Resolution Board has significant powers to intervene in banks that can no longer be stabilised by means of recovery measures. These authorities apply throughout the Eurozone.

All these levels communicate with each other and are interrelated through each other's boards and working groups. However, this does not necessarily imply that the requirements they set for the financial sector are mutually consistent. The accumulation and complexity of the entire package of rules is a huge challenge, for the regulators themselves and for the financial institutions. International standards and guidelines moreover have different effects in different regions due to institutional differences and different market structures.[4] This then means that the international capital standards are not adopted everywhere and at exactly the same time in national legislation and supervision, although of course the intention is that what is agreed worldwide should also be applied worldwide. We discuss the tensions that this creates in more detail in section 2.

The Capital Accords Basel 1,2,3

Basel 1 consisted of a basic framework with five broad risk categories and minimum capital requirements for credit risk and market risk. Basel 1 set a minimum capital requirement of 8% equity expressed in the risk-weighted assets, of which at least 4% must be Tier 1. The accord was in response to a number of developments in the banking sector, which included increasing internationalisation, deregulation in the preceding years and – in the eyes of the supervisors and regulators at least – too low levels of capital, certainly at the banks operating internationally. It was the first global capital accord between the supervisors and ministers of the largest economies. The strength of Basel 1 lay in its simplicity and its broad application.

Basel 2 was a further development of Basel 1 and introduced the three pillars of regulation, supervision and market discipline. It also introduced a finer definition of risk categories and paid more attention to operational risk. Basel 2 was agreed because there were difficulties with the Basel 1 regulation, mainly due to the lack of differentiation of risk as a result of which the gap between the actual risks and the capital requirements became too wide. This encouraged regulatory arbitrage. Furthermore, Basel 1 offered no answer regarding the capital requirement that was appropriate to new financial products such as securitisations, CDS swaps, etc. With Basel 2, the aim was to determine risk weights more satisfactorily and better correspond with the risk management at the banks themselves. The so-called Pillar 1 requirement of at least 8% capital under Basel 1 remained unchanged, however the way in which this was established changed significantly. Moreover, in Pillar 2 risk management procedures were (and still are) assessed that are not included in Pillar 1, such as interest rate risk, liquidity risk and concentration risk. The third pillar, market discipline, imposes requirements regarding the publication of information by banks. The objective is that the market will force banks to be adequately capitalised and avoid taking excessive risks. This process of market discipline assumes that investors are able to absorb the information published by the banks and the supervisors. In this article we will show that this is not necessarily the case.

[4] For example, the effect of Basel 3 varies considerably in different parts of the world. For an interesting study of this, see Cognizant (2015).

When the financial crisis erupted in 2007, it revealed that too many banks were holding too little capital, and that the quality of this capital was not sufficient. Not all capital actually turned out to be loss-absorbing capital. In addition (or perhaps it's more correct to use the term especially) liquidity became a huge problem. Banks could no longer borrow from each other, and banks with weak balance sheet positions could no longer approach other banks or the capital markets independently. This meant that a large-scale intervention by supervisors, central banks and taxpayers was necessary to stabilise the system. There are many lessons to learn from this, and this has already been covered in many publications and discussions.[5] A number of these lessons concern capital regulation. It became apparent that the banks were not adequately positioned to absorb shocks. It also made clear that financial innovation had eroded the foundations of Basel 2. The trend of securitisation was significantly motivated by the lower capital requirement for the trading book in comparison to the bank book, and the credit risk in the trading book increased sharply as a result of this securitisation. In other words, the market had found an attractive way to fund these loans with a lower capital requirement (Smolders, 2010). The Credit Value Adjustment risk was also underestimated. Basel 2 needed an update. The Basel Committee therefore issued various recommendations in 2009 and 2010, which were finally combined into the third Basel Accord.

Briefly, Basel 3 comes down to much more capital and a further increase in the quality of that capital. The total capital requirement increases with the addition of a conservation buffer, an counter-cyclical buffer and an extra requirement for systemic banks. The quality of capital will rise, partly because the minimum requirement for common equity will be raised in steps from 2% to 4.5%. The criteria for the qualification of common equity have been tightened and fewer capital instruments now qualify for the highest capital requirements (for example, hybrid capital will only still count as tier 1 capital under strict conditions). Basel 3 also includes other several new or tighter requirements, for example with respect to the liquidity ratio (Net Stable Funding Ratio and Liquidity Coverage Ratio), as well as simplifications such as a reducing three tiers of capital to two. The Basel Committee has also decided that caps should be set for the leverage ratio (Tier 1 capital/leverage exposure). The Basel Committee has agreed an observation period to allow it to make a better assessment of the levels of leverage ratios in various parts of the world and how regulation in this area is developing in countries. It is clear that the requirement for the leverage ratio will be tightened. We will abstract other aspects of Basel 3 for the purpose of giving a general outline.

[5] See for instance Blanchard (2009); Acharya et al. (2010); Bernanke (2009); Cecchetti (2010), Blinder (2013) and Kamalodin (2012).

'Basel 4' is in the making

The recent proposals for further reforms of Basel can be lumped together under the title of 'Basel 4', although it is still far from certain that Basel 4 will be limited to these proposals. In any case it is clear that Basel is working on further requirements for the leverage ratio, proposals for capital floors within risk models, revision of the Standard Approach and measures that should lead to greater disclosure in Pillar 3. While Basel 3 focused mainly on the numerator of the capital ratio, Basel 4 will focus on the denominator: the risk-weighted assets (RWA). More precisely, on how this should be calculated. The most important reason for this being on the international agenda results from analyses by the Basel Committee and the EBA of RWAs at banks in 2013, which included both a standard portfolio with corporate loans and a mortgage portfolio. This revealed differences in the capital held by large banks that were not – or not immediately - explainable. The differences can partly be explained by the number of defaulters, which varies from one bank to another, differences in the quality of risk management, and – between countries – by different legislation (for example, bankruptcy legislation and the definition of default). This may also be partly due to other reasons, such as in the modelling by the banks, or differences in supervision. The Basel Committee and the EBA aim to understand these differences better and limit these differences where there is no foundation for them. Another purpose of the exercise is to reduce the extremes by making the models more conservative and making the data meet stricter requirements. This should increase confidence in the models. This brings us to the discussion of the view taken by the parties involved.

2. Debate on the system of capital requirements and banking supervision

The financial crisis led to a widely shared belief that the regulation and supervision of the banks needed to be reformed. Regulators, supervisors, politicians and the banks themselves want to make the system more robust, more transparent, simpler and more uniform in order to reduce the likelihood of problems recurring and to increase confidence. This is expressed in a number of ways, in which less risk tolerance is the central theme: certainly, no more risks for the taxpayers. Higher buffers, bail in, resolution, stricter risk management, these measures focus primarily on prevention, on placing risks on those who should bear it, on increasing the ability of the banks to absorb losses and on taking action more quickly if things go wrong. The banks will thus be encouraged to simplify their structures and make them easier to wind up.

The direction of the changes in the capital regulation as described above is fairly clear. There is however less agreement regarding the dimensions of new requirements, the complexity of all the rules that is getting out of hand and the potential consequences of stricter requirements for the economy, in the short and the long term. Seen from this perspective, the calibration of new requirements and the terms set for introduction are important. How quickly can the financial markets adjust, and what might the change effects be? Which are intended and which unintended? On the basis of several questions, this section deals with what we see as the most important points of discussion. We will look at both the micro and the macro level, in other words the impact of requirements on the greater whole.

What is a 'good' level of capital for banks?

More capital gives more assurance that banks can absorb shocks. On the other hand this will cost money that – in any case in the short term – will be at the expense of other spending priorities. Up to what level do the benefits of more capital outweigh the costs? (private and public costs together). What is the best level from a societal point of view (or levels if there are multiple best results)? Is this a level up to 100% full reserve banking? (for a discussion of this, see Boonstra, Vries, 2014). Or a buffer level that is sufficiently high to absorb most of the problems at collapsing banks in historical terms? Or yet another level, for instance as much capital as is held by a normal business?[6]

The debates in the Lower House of the Dutch Parliament on the recommendations by the De Wit Committee in 2010, which studied the credit crisis, and subsequently on the report of the Wijffels Committee (2013) as well as the discussions that are currently ongoing show that there is a broad consensus among politicians and supervisors in the Netherlands that the capital to be held by banks will have to increase. While the banks are criticising parts of the proposals, they are not against the concept of higher buffers. This is a misunderstanding in our opinion. If the risks are actually higher than originally thought and a higher buffer will enable the banks to operate their business more securely, then this buffer is sensible. Forming prudent reserves for risks is one of the basic principles of banking. However, in all honesty, no one knows what the 'optimal' level capital is. The new requirements in any case are significantly stricter than those prior to the financial crisis in 2007, and if they had been in force at that time, in our view the capital (and liquidity) buffers would have been enough to absorb the shocks to a significant extent.

Besides the size of the buffers, the debate also focuses on the calculation methodology, the term set for the introduction of new requirements and matters such as the impact on a level playing field with other providers. In its final expression, the banks support Basel 3, the European Capital Directive and

[6] Now that we are discussing an optimal level: does the focus on more capital take enough account of the likelihood of *liquidity* problems? Most problems actually start with liquidity. Furthermore, do the models take sufficient account of herd behaviour, contagion and effects on confidence? Any bank buffer will be too low if confidence has gone. In this case, settlement or takeover by a stronger party will be a more likely option.

Regulation, and – more recently – the minimum 3% leverage ratio (the Netherlands uses a minimum of 4% and is therefore out of step), the concept of additional requirements for systemic banks and for the total loss-absorption capacity of capital (TLAC, MREL). Adequate buffers increase the room available in the event of problems and the risk-sensitive buffers moreover influence policy direction. Higher buffers are however not the only answer; risk mitigation – but also risk *tolerance* – is just as important. Banking essentially still involves the taking of risk, requiring security and trusting that the money lent will be repaid. And for savers, giving them the confidence that their money is safe with the bank. Moreover, if the buffers are set too high, this will not increase their effectiveness (as they could have been lower) and in the meantime they cost money. There is no 'free lunch': you can only spend money once, this applies to banks as well.

How do capital requirements affect lending and economic growth?

The effect of capital requirements is different in the short term than it is in the long term. In the *short term*, higher capital requirements may be at the cost of the ability to fund loans if a bank is close to the limit of an important ratio. In this case it is quite possible that a bank will respond by tightening its conditions for accepting loans or raising its charges (more accurately, increasing its interest margins: total charges are influenced by many other factors and it is difficult to make predictions in this respect). Besides this, banks will raise extra capital and try to reduce their costs. In any case, a sustainable business operation requires sufficient buffers that are well above the minimum levels. A bank which is above these levels will not experience any limitations. Banks that are close to or below the minimum levels will have to take action.

In the *long term*, the connection between stricter requirements and the accommodation of growth is debatable in our view. It can quite justifiably be said that banks that want to be able to properly fulfil their role as a financier simply must have sufficient capital. From this point of view, they are not likely to have too much: preferably more than not enough. But in the long term as well, higher capital comes at a cost. Equity comes at a high price (because it is risky). To some extent, senior and other debt will become slightly cheaper (since there will be a higher capital buffer to absorb the initial shock), however the providers of senior and other debt now have to deal with bail in. On balance, this will not deliver a benefit compared to the present situation.

In practice, banks take various measures simultaneously and other issues are involved: the business models come under scrutiny. The implications of higher capital requirements will vary widely between different banks and in different scenarios. These differences mean that analyses will deliver something for everyone. Then, the consensus opinion counts the most. It would seem that for most regulators and politicians, concerns about growth do not in any case outweigh the main social need for security and stability. A sense of differentiation seems to have been lost. Possibly, this is partly because the banks are not visible enough in the debate and are not taking a sufficiently proactive stance. The banks are after all engaged in reviewing their business models, innovating, looking for more of a coordinating role in lending (e.g. cooperation with pension funds, insurers, private equity, and the likes of crowd-funding) and introducing the new capital and supervisory requirements. This can hardly be called a passive stance. Furthermore, there are numerous factors that affect lending. Banks can influence some of these, but not others.[7] Too little capital among SMEs is also a problem, perhaps a more deeply rooted problem than too little bank lending.[8]

The new capital requirements will, apart from availability of credit and the cost – which may have different effects in the short and the long term – lead to greater price *differentiation*. Spreads for loans to SMEs (or, put another way, different pricing based on the risk of an individual client) are already widely accepted, while for mortgages this is less the case. This is already changing now, as there are already different interest rates used for different categories of LTV (loan-to-value).[9] Further differentiation in rates may be introduced in future.

Impact on non-bank intermediation?

Stricter regulation of the operations of banks can lead to more non-bank intermediation, with different or more or less similar risks. On the one hand, there are benefits from non-bank intermediation: greater competition, addition to existing channels of intermediation, or facilitation of lending, such as through securitisation. On the other hand, it will make it difficult to control certain risks, and there needs to be a level playing field. It is certainly not the case that non-banks are unsupervised, however their supervision is more fragmented than the supervision of the banks. This produces a vulnerability: just as with tax arbitrage, there is also supervisory arbitrage and movement to regimes with lower capital requirements.[10] Non-banks are subject to different prudential requirements than banks and these requirements are less strict in certain areas, although the reverse

[7] The development of lending is also influenced by the economic conditions and prospects, which affect the propensity of businesses to invest.

[8] The crisis has led to SMEs using up their reserves, making it more difficult for banks to fund them. See for example the Social and Economic Council 'SER' (2014) and the Netherlands Bureau For Economic Policy Analysis 'CPB' (2014), for analysis of this capital position. The ability of SMEs in the Netherlands to raise funding is heavily dependent on bank lending. The fact that 'Basel 4' will also have an effect in this area is still not widely understood.

[9] September 2015: between low LTV/NHG and the highest category the range is from 60 basis points (Obvion) to nearly 140 basis points (SNS, ING). At Rabo it is 90. Source: calculation by the Economic Research Department of the Rabobank.

[10] For an account of shadow banking in the Netherlands, see Broos et al (2012).

may apply in other areas. Furthermore, account has to be taken of the different terms to maturity and nature of the obligations of diverse players in the financial system, which leads to a different prudential supervision. A distinction should also be made between investing in securitised loan portfolios and the issuance of new loans. With respect to the latter, the parties are in competition. For the former, both parties gain something from the deal. However one views this, mortgages – which are part of the issue discussed here – are, for instance, very strong assets on a bank's balance sheet with predictable income flows. The banks would in principle prefer to retain their mortgage portfolios. The attractiveness of removing these assets from the balance sheet depends on price and conditions. In fact, a wider study is needed of the intended and unintended consequences of differences in regulation, the effects of substitution and where the risks in the system lie. The G20, the FSB and for example also the European Commission are engaged in this.

Do higher capital requirements mean lower profit for banks?

As already stated, higher capital requirements have to be paid for somehow. Whether this is expressed in lower profits for the banks, higher productivity or lower pay for workers in the financial sector, or higher charges to clients depends on various factors. Competition between banks, with new providers and in the labour market, possibilities for banks to cut costs, the availability of alternatives for customers looking for finance or somewhere to place their savings, opportunities (and the conditions applying) to remove parts of loan portfolios from balance sheets: these are all relevant factors. In addition, there is another factor involved, which lies in the capital markets. The return on bank paper cannot substantially differ from that on other investment categories over the long term. Greenspan (in: Financial Times, 2015) for instance illustrates using historical data that the percentage of net income divided by the balance sheet over the years has a tendency to be equal to the return achieved from other investments.[11] The former Fed chairman also points out that banks that have to hold more capital will try to retrieve their higher costs of capital by increasing their interest and their non-interest income. This is of course only possible to the extent allowed by competition, and to the extent it is necessary because costs of capital can decline at a later date.

A spin-off of holding more capital is that there will be less need for ever-increasing supervision. Banks with high buffers will be better positioned to bear the costs of their own mistakes. This is an important point, because the disruption to the market caused by complex regulation such as Dodd-Frank is much greater than the disruption caused by higher capital requirements. In essence, we wholeheartedly agree with this: we would rather see more (common equity) capital, effective and

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[11] If the return on bank shares is higher than on other investments demand for them will increase, prices will rise and the effective yield will decline. If the return is lower, the reverse will apply.

strong supervision that focuses more on the main issues and more transparent market mechanism than overly detailed regulation.

Who decides what is a good risk model for a bank and whether the capital reserves are adequate?
Does the bank or the supervisory decide what risk model is appropriate? This essential question is up for discussion, with the far-reaching proposals for setting floors for the internal risk models used by the banks (see the discussions ongoing at the EBA, ECB, Basel Committee, and soon undoubtedly the European Commission as well and the European Parliament, or the Lower House of the Dutch Parliament). The room for banks to make their own assumptions and risk assessments may be reduced. What does this entail? Why is there no longer confidence that a bank itself has the expertise and its own interest in assessing risks effectively? After all, it is the bank itself that reaps the gains and bears the losses. How can this confidence be restored? Are there really no better alternatives available than targeting all the internal models? How can one prevent that banks will soon use a model that is close to the average model clearly approved of by the supervisor and then taking more risk in their portfolios with a higher return, within the established norm? Or the risk that the supervisor gets things wrong and therefore all the banks will also get things wrong, even with their nicely approved models?

Another crucial question is who should prove that a risk model is good, or that a risk has been accurately assessed and that the processes are correct. The banks are engaged in increasingly intrusive discussions with the supervisors regarding how their models work and that the underlying data and results are reliable. In the past, the burden of proof rested on the other side, with the supervisor. This also had some disadvantages. The supervisor had to clearly explain why he was not convinced by a bank's account of itself. In a recent paper, IMF researchers Fullenkamp and Rochon (2015) concluded that supervisors have difficulty in proving that a bank's capital is too low due to the complexity involved and the fact that the banks control the data. In their opinion, this needs to be changed. Therefore they advocate a reversal of the burden of proof. This would also help to increase capacity and expertise of the supervisors to better understand the bank models and to make good and quick decisions (strengthening of Pillar 2).

Strengthening the expertise of supervisors and having more insight into data unreservedly seems to us to be logical and sensible. Regarding the second point, one effect of the reversal of the burden of proof could be that the diversity of risk models would be reduced and we will have to be cautious about this. If this leads to the banks deciding to play it safe and designing their models so that they are likely to be approved, this will create an undesirable situation. The internal assessment and justification of risk (and return) should not be driven by the expectation that something will be approved. A supervisor will moreover benchmark and confront banks with the differences. This will also probably reduce diversity, intentionally or otherwise. Knowledge of individual banks can also be passed to others, directly or implicitly. While in the interests of restoration of confidence and stability it is important that extremes are removed from models, it is certainly not the intention that all models should be the same.

When should a supervisor act? And what information should it publish?

The direction in which supervision is moving is one of more intrusive supervision and more transparency. Supervisors now have additional powers, better information due to more quantitative reporting, and they have complete recovery and resolution plans ready for use. Resolution authorities have also been set up that can take over the direction of a bank. Many of the measures taken by the supervisors happen behind the scenes, in order to avoid making the financial markets nervous and to make supervision as effective as possible. At the same time, credible supervision requires visible measures and a vigorous supervisory authority. This is a dilemma. One option could be to make the so-called 'Prompt Corrective Action Standard', or a version thereof, more generally accepted within the supervision. This standard states the situations in which a supervisor must take action and how and where the US banks cooperate (see Fullenkamp and Rochon, 2015). This was also looked at in the Netherlands at the time of the drafting of the Intervention Act. In Europe there are elements in the BRRD, which adds other issues to this. To us, it would seem to be a good thing if the supervisor were to publish the minimum capital levels set for individual banks. However the resolution authority and the supervisors look at both micro stability and macro stability, and thus consider broader interests. Failure to intervene when necessary is always wrong, however the timing and the manner of the intervention and also the degree of openness still have to be chosen specifically in each case.

What can we expect from market discipline?

Market discipline can – and must – make a more important contribution to the two other pillars of capital regulation, namely supervision and regulation (see section 1). Investors vote with their feet and set conditions for the provision of capital. Investors compel banks to formulate their business models and capital strategies in such a way as to inspire confidence among other stakeholders and clients. Regulation and supervision should provide the framework. Besides this, the market needs a supervisor. The market itself has to decide which business models will and will not be funded, and on what conditions.

Market discipline could be made more effective if there was greater transparency and more uniform and simpler rules, according to Haldane, (2012), and Fullenkamp and Rochon (2015). However, it may also be assumed that professional investors are able to derive the relevant data from reports in order to form an impression of return and risk, despite the problem of comparability of the data provided by the banks. But there is more to this. A study by Barclays Capital in 2012 revealed that more than half of investors stated that they could not adequately assess the risk-weighted assets of banks and had little confidence that these had been properly calculated. Parties such as BlackRock and Pimco have consequently stated that they want to see more transparency. In a report issued in 2015, BlackRock gave a long list of recommendations that could be summarised as: we want to know everything. This desire from the market and from supervisors indeed means that banks will be producing an ever-increasing flow of information. Nevertheless, in our view the holistic approach actually seems to be sensible: what do we really need to derive from all these data and how can we then ensure that the data are comparable, timely and reliable? More is not necessarily better.

Reducing complexity is the holy grail: but how?

Capital requirements have become complicated, and the question is whether complex models give more assurance than simpler and more straightforward ones. Haldane (2012) argues that this is often not the case. One of the explanations is that complex models need a large number of observations in order to estimate risk more accurately than a simple model. If this is not the case, the risk of 'overfitting' of a model lurks in the background: when deviations are incorrectly classified as good observations and thereby a relationship is assumed that does not exist.

Can regulation be simpler and less detailed? The introduction of Basel 3 provided the regulators, banks and consultants with a lot of work. According to one estimate in circulation, a startling figure of 70,000 FTEs are involved in the introduction of Basel 3 (ibid). The capital requirements are moreover just one of the many major concerns for bankers and regulators. The Dodd-Frank legislation for instance accounted for many tens of thousands of FTEs. This raises the question of how capital regulation can be made less complicated. Haldane makes five proposals, three of which we will consider here: the taxation of complexity, placing the leverage ratio and the capital ratio on an equal footing and the introduction of the new Basel capital floors.

In our view, taxing complexity is an excellent idea, as long as it is well formulated and really kept simple. Excessive complexity can make the really important developments less visible. However, a return to Basel 1 is not an option. Thus we need a combination of requirements. The additional requirement for systemic banks is reasonably straightforward and therefore a good example, although in our view the size of the buffer should be more harmonised, at least in the European context. Our view regarding Haldane's point that leverage ratio risk and the weighted capital ratios should be considered together is as follows: if a bank's leverage is extreme, this indicates a higher level of risk. However, when the leverage ratio is closer to an average value, this instrument is less unequivocal. Banks with relatively safe assets, which fund many government or infrastructure projects, as the Nederlandse Waterschapsbanken (a Dutch financial services provider for the public sector) finance local authorities, can afford a higher leverage. Do these banks then actually incur greater risk? Probably not. They certainly can still encounter problems, but not for that reason. The German Landesbanks have for example ended up in a difficult position because they ventured into activities outside their normal operations and purchased large amounts of US securitised loans in a short space of time. The leverage ratio is not a measure that will cover this kind of risk effectively. We think that risk-sensitive models should be leading and that these could be combined with unweighted requirements as a back-stop, such as the leverage ratio.

Supervision should be consistent internationally, but the case-specific approach is still important

Internationally consistent prudential supervision is important for the effectiveness of supervision in a global financial system. At the same time supervisory agencies take a case-specific approach in the supervision of individual institutions. Existing differences between banks business models, in national market structures and in national legislation are still relevant. Harmonisation of banking supervision and regulation can be achieved partly through international agreements, partly through harmonisation of supervisory practice and partly through pressure from the market. The Basel guidelines would play an important part in this, due to their wide-ranging support and application. It is for policymakers to decide what should be regulated in Pillars 1, 2 or 3. In our opinion, the new proposals for the Basel capital floors would fit best in Pillar 2, among the supervisory instruments therefore, so that these could give additional insight into the institution's level of capital in comparison to the floor. In this respect, Pillar 1 is more rigid than Pillar 2. In any case, a situation in which the capital floors either rule out the risk models because they are set too high or make the risk models irrelevant if they are set too low must be avoided. The floor can supplement the stress test, the Supervisory Review and Evaluation Process (SREP) in Pillar 2 – which sets standard procedures and methodologies for supervisors that will apply with effect from 1 January 2016 – and the other instruments the supervisors already have. In combination, these will enable the supervisor to impose a higher requirement than would apply under Pillar 1. Obviously, how supervisory authorities address this around the world would have to be monitored and the results would have to be benchmarked. This could create equal practice that would still take account of certain national characteristics and structural differences between markets.

Conclusions and recommendations

Since numerous regulations have been added in recent years, we would welcome further studies that consider the matter as a whole. Not all the rules are coherently fit together, and not all of them exactly achieve their intended purpose. We think it is important that proper consideration is given to the dimensions of requirements, the mutual interactions of rules and potential arbitrage effects. Furthermore, the potential effects on lending and economic growth need to be estimated well, and of course institutions should be given sufficient time to respond to new requirements. After this, we can move forward with a set of 'Regulations 2.0' that are adjusted and strengthened in certain respects. We need to return to something less complicated in capital regulation. Otherwise, there is a danger that regulation and supervision will fail to achieve its aim of ensuring stability. Arbitrage will weaken the foundation of the system. A combination of simple requirements and more risk-sensitive requirements will probably be the most effective way of addressing and mitigating risk.

The proposed Basel capital floors and the amendment of the Standard Approach would seem to be disproportionate with respect to mortgage portfolios, SME funding and specialised lending. This may lead to undesirable economic and social consequences. Therefore, proper calibration of the proposals is needed. Furthermore, we argue that capital floors would be most effectively deployed in Pillar 2 as an extra assurance for a supervisor and comparable to the important role of stress test information. In Pillar 2, the instrument can be applied in a way that is appropriate to the situation. For risk management, it is essential that the banks set policy on the basis of actual risk.

In this article we have also argued for studies to establish whether transparency with respect to the capital positions of the banks can be increased (strengthening of Pillars 2 and 3). For example, by requesting supervisors to explain the system and methodology that they use when arriving at decisions at individual bank level. The ECB could furthermore consider publication of individual minimum capital levels and findings.

Given good formulation and taking account of the points raised above, we are convinced that it is possible to arrive at a robust combination of regulation, supervision and market discipline. A combination with effective monitoring and transparency, in which good performance by banks is rewarded and measures are taken if performance is inadequate. This is an exciting prospect, for everyone.

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