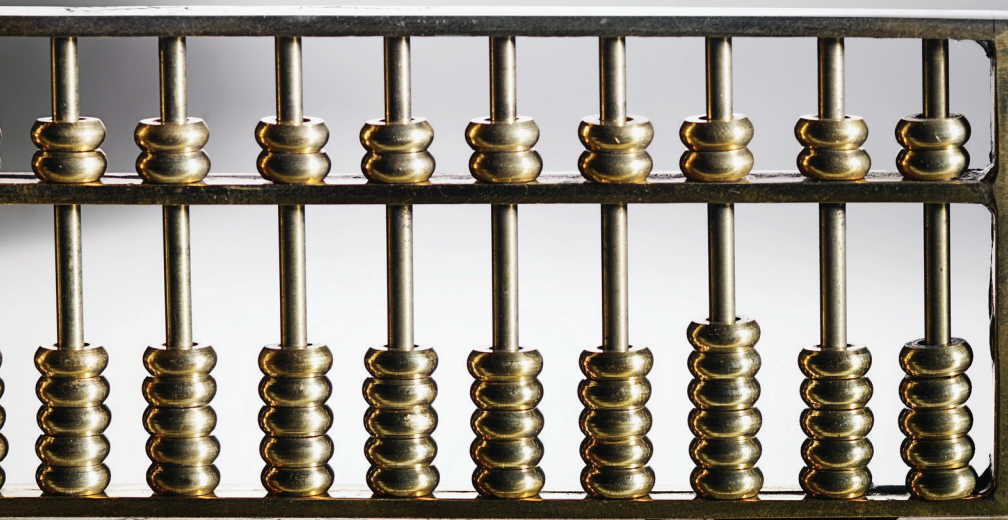


# Basel III: The final regulatory standard

Basel III's finalized regulatory standards will have less impact than was first assumed, but banks still need a holistic approach to capital management.

Thomas Poppensieker, Roland Schneider, Sebastian Schneider, and Lennart Stackebrandt



On December 7, 2017, the Basel Committee for Banking Supervision (BCBS) published the final regulatory standards in its postcrisis Basel III reforms. The standards reflect changes that were long discussed, as reported in BCBS consultation papers. During the discussions, the proposals were sometimes referred to as “Basel IV.” In previous reports, we analyzed potential outcomes for European banks of the finalized regimen, establishing a rigorous methodology to calculate the impact while taking what turned out to be a conservative view with respect to both capital ratios and the time to implement.<sup>1</sup> Using the same methodology, we can now estimate the impact more accurately, based on the BCBS’s finalized Basel III regimen.

### Regulatory developments since the ‘Basel IV’ proposals

The impact of the finalized regimen is expected to be smaller than was assumed during the consultation period, as many of the proportional requirements and the time to implement them proved to be more relaxed than many analysts had predicted.

### The risk weighted–asset output floor and revisions to the credit-risk framework

As suggested in an address given last spring by BCBS secretary general William Coen, much debate about the final standards centered around the internal model floor of total risk-weighted assets.<sup>2</sup> This level was ultimately calibrated at 72.5 percent. In our earlier paper, “‘Basel IV’: What’s next for European banks?,” we made an initial conservative assumption that this level would be set higher, at 75 percent. In a number of areas, furthermore, the published standards specify changes that will have less impact than was at first expected. In the revised credit-risk standardized approach, for example, corporates rated BBB+ to BBB– receive a risk weight of 75 percent rather than 100 percent, while financial institutions rated A+ to A– receive a risk weight of 30 percent instead of 50 percent. Residential-mortgage risk weights are also revised

downward, by approximately five percentage points, along the whole risk-weight mapping table. A new approach reflecting mortgage splitting (multiple loan accounts for the same property) can be adopted at member nations’ discretion.<sup>3</sup> On the other hand, the introduction of a 10 percent floor for standardized credit-conversion factors is expected to increase exposure values.<sup>4</sup> All these changes also affect the internal model floors indirectly, by reducing the risk weighted–asset positions calculated according to the credit-risk standardized approaches.

One significant change in the internal model standards for credit risk is the elimination of the 1.06 calibration factor introduced with Basel II. Moreover, the revenue threshold for large and medium-size corporates is revised upward, to over €500 million; large corporates can still be treated under the foundation internal model approach, similar to financial institutions. Finally, input parameter restrictions for own estimates of loss given default (LGD) are lowered in many cases by five percentage points. In contrast to the internal model floor, these adjustments are beneficial for banks using internal models: they reduce the impact or even reduce today’s internal-model risk weights. However, they also increase the relative impact of the aggregate risk weighted–asset floor.

### Standardized measurement approach for operational risk

The new proposal for the operational-risk standardized measurement approach (SMA) was already known before final standards were published. In the final standards, a number of important changes were specified. First, the SMA allows national regulators to decide whether to require institutions to include historical operational-risk losses into the operational-risk capital calculations. The new SMA also recognizes three rather than five business-size categories for measurement: up to €1 billion, €1 billion to €30 billion, and above €30 billion. The coefficients for these categories are now 12, 15, and 18 percent respectively—as opposed

to coefficients of 11, 15, 19, 23, and 29 percent for the five former categories. This substantially lowers the capital requirements from those proposed in the consultation documents.

The finalized regulatory scenario is briefly sketched in Exhibit 1.

### Adoption timeline

A long transitional phase-in period is provided, with first-time adoption in January 2022 for the standardized approaches. Phase-in arrangements for the internal model floor, including a risk weighted–asset cap of 25 percent, will run until 2027. This follows the revised implementation of the finalized market-risk standards—also known as the fundamental review of the trading book (FRTB)—which was pushed back to 2022 but is again under consultation. The long phase-in arrangements are especially beneficial for portfolios with long maturity profiles, such as mortgage books; they also give banks the time to build up capital organically to cover remaining shortfalls. Banks should be aware that analysts and investors will expect them immediately to report fully loaded numbers, irrespective of the phase-in arrangement (as happened with the previous Basel III phase-in).

### Additional developments relevant for a comprehensive picture

In conjunction with the finalized Basel III standards, banks need to consider related initiatives to obtain a comprehensive regulatory picture. These initiatives include risk weights for sovereigns (for which the Basel Committee published a discussion document), the European Targeted Review of Internal Models (TRIM), the requirement to set up intermediate parent undertakings for large non-European banks, and the revised capital frameworks for securitization, counterparty credit risk, and credit-valuation adjustment (CVA).

Banks holding large amounts of sovereign debt—where governments relied on banks when financing

public deficits, for example—may experience a significant impact from the sovereign risk weight proposals. The European Banking Authority (EBA) also released important guidance for model risk. European firms will be required to quantify model risk, and as such today’s RWA have to be split into “best-estimate RWA” (best estimate not considering model risk) and “margin of conservatism” (MOC). The EBA explicitly asks firms to reduce MOC over time. Given this context and the TRIM, firms will need to review their internal risk parameter models used to calculate RWAs as well as better understand how the floor will relate to the best-estimate RWAs and the reduced MOC. The effects of a number of these initiatives can be precisely assessed only by each firm, relying on its own proprietary information.

For this article, we were able to measure the impact of three important initiatives: risk weights for sovereigns, TLAC/MREL, and IFRS9. The acronyms refer to the Financial Stability Board’s minimum standard for “total loss-absorbing capacity” (TLAC) for global systemically important banks, its European extension for banks regulated by the Single Resolution Board—the “minimum requirement for own funds and eligible liabilities” (MREL)—as well as the “international financial reporting standard” of the International Accounting Standards Board (IFRS 9). Loss-absorbing capacity is indirectly affected, given that MREL/TLAC requirements are based on RWA and leverage requirements and will therefore increase with the introduction of the new standards. Rather than outlining any bail-in-related capital shortfalls, however, our analysis includes the increasing funding costs driven by issuance of bail-in instruments into the profitability analysis. Since the baseline analysis does not include the effects of IFRS 9, the effects on common equity Tier 1 capital (CET1) ratios have been considered.

### Updated capital impact for the European banking industry

The capital impact of the finalized Basel III regimen can now be estimated more precisely.








### Improved baseline capitalization of European banks

While our earlier “Basel IV” publications reflected data from the first half of 2016, this update reflects the capital and portfolio migrations of European banks from the first half of 2016 to the first half of 2017.

Our new impact estimate is based on the new regulatory endpoint scenario (detailed in Exhibit 1) and the latest available transparency exercise of the European Banking Authority, published in November 2017. Our earlier sample of 130 banks has been adjusted to 132 to reflect the latest changes

in bank structures. We also recognize that the new baseline demonstrates improved CET1 ratios by approximately 0.8 percentage points, from 13.4 percent in the first half of 2016 to 14.2 percent in the first half of 2017. On a fully loaded basis, the improvement amounts to approximately one percentage point. The effect was the result of capital built up through retained earnings and issuance (approximately 0.3 percentage points) and risk weighted–asset reductions (approximately 0.7 percentage points).<sup>5</sup> These movements in balance sheets and capital composition might have been motivated by initial considerations of “Basel IV” papers.

## Exhibit 1 Final regulatory initiatives and assumptions of Basel III, analyzed for European institutions.

Initiatives	Key scenario assumptions	Finalized standard?
Fundamental review of the trading book	<ul style="list-style-type: none"> <li>Assuming the standardized approach, market-risk risk-weighted assets increase by 70–80% and internal model market-risk risk-weighted assets increase by 25–40%, depending on a bank’s capital-markets footprint</li> </ul>	
Revised credit-risk standardized approach	<ul style="list-style-type: none"> <li>Regulatory ratings–based risk weights for banks and corporates using revised risk-weight tables</li> <li>Assumption: 5% of exposures fail due diligence</li> <li>Corporate SME<sup>1</sup> exposure receives 85% risk weight (and SME factor of 0.7619)</li> <li>Mortgage risk weights based on loan-to-values (LTVs); assumption: 20% of exposures dependent on cash flows of property and mortgage splitting allowed</li> <li>80% of qualifying revolving and other retail receive 75% risk weight (remainder receives 100%)</li> <li>Equity and subordinated exposures’ risk weights range from 150% to 400%; assumption: risk weight of 250% for “all other equity holdings”</li> </ul>	
Change in credit-risk internal ratings–based approach	<ul style="list-style-type: none"> <li>Financial institutions to use foundation internal ratings–based approach (F-IRB)</li> <li>Large and medium-size corporates (turnover above €0.5 billion) move to F-IRB</li> <li>Specialized lending remains under advanced internal ratings–based (IRB) approach</li> <li>Equity exposure moves to standardized approach</li> <li>Removal of adjustment factor of 1.06 to IRB formula</li> </ul>	
Aggregate risk weighted–asset floor	<ul style="list-style-type: none"> <li>Aggregate internal ratings–based output floor of 72.5%</li> </ul>	
Revised operational risk	<ul style="list-style-type: none"> <li>Removal of advanced measurement approach (AMA)</li> <li>Application of standardized measurement approach (SMA) for all banks and exclusion of loss component in SMA formula</li> </ul>	
IFRS 9	<ul style="list-style-type: none"> <li>Impact on common equity Tier 1 capital (CET1) through retained earnings, driven by provisioning based on revised expected-loss model</li> </ul>	
Risk weight for sovereigns	<ul style="list-style-type: none"> <li>Removal of IRB and application of proposed standardized risk weights</li> <li>Risk-weighted asset add-on for concentration risk</li> </ul>	

Note: IFRS 9 refers to International Financial Reporting Standard 9.

<sup>1</sup> Small and medium-size enterprise.

### Capital relief resulting from lighter regulatory proposals

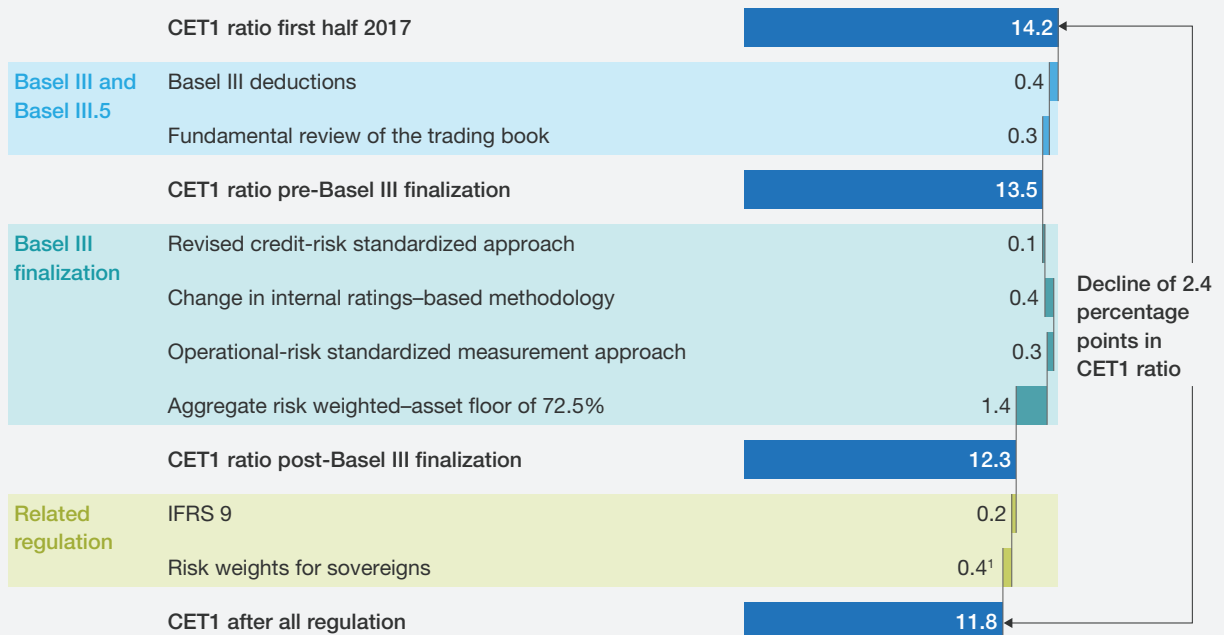
As shown in Exhibit 2, Basel III finalization and related regulation brings down CET1 ratios for European banks by 2.4 percentage points, from 14.2 percent to 11.8 percent. The remaining CET1 capital shortfall comes to approximately €56 billion, considerably below our initial assessment of €120 billion.<sup>6</sup> The largest share in the CET1 reduction, 1.4 percentage points, is expected from the aggregate risk weighted–asset floor of 72.5 percent; the operational-risk SMA will probably account for 0.3 percentage points in the reduction. Our assessment also shows that the revised frameworks for credit risk IRB (0.4 percentage points) and

standardized approach (0.1 percentage points) have a facilitating effect. Our initial assessment of the new sovereign-risk consultation indicates a drop in the CET1 ratio of 0.4 percentage points. An analysis of the impact by bank reveals that for about 50 percent of all banks, the RWA-based metrics will impose the highest capital requirements. By contrast, 35 percent of banks will be most constrained by the aggregate RWA floor and only about 15 percent by the revised leverage ratio.

Moving on to Exhibit 3 below, we can see how the impact for European banks has changed under the final Basel III standards. The average CET1 ratio would drop by 1.6 percentage points, from

## Exhibit 2 Basel III finalization and related regulations lower the common equity Tier 1 capital (CET1) ratio for European banks to 11.8 percent.

Implicit weighted-average CET1 ratio of 132 banks participating in the European Banking Authority's transparency exercise, as of the first half of 2017, %



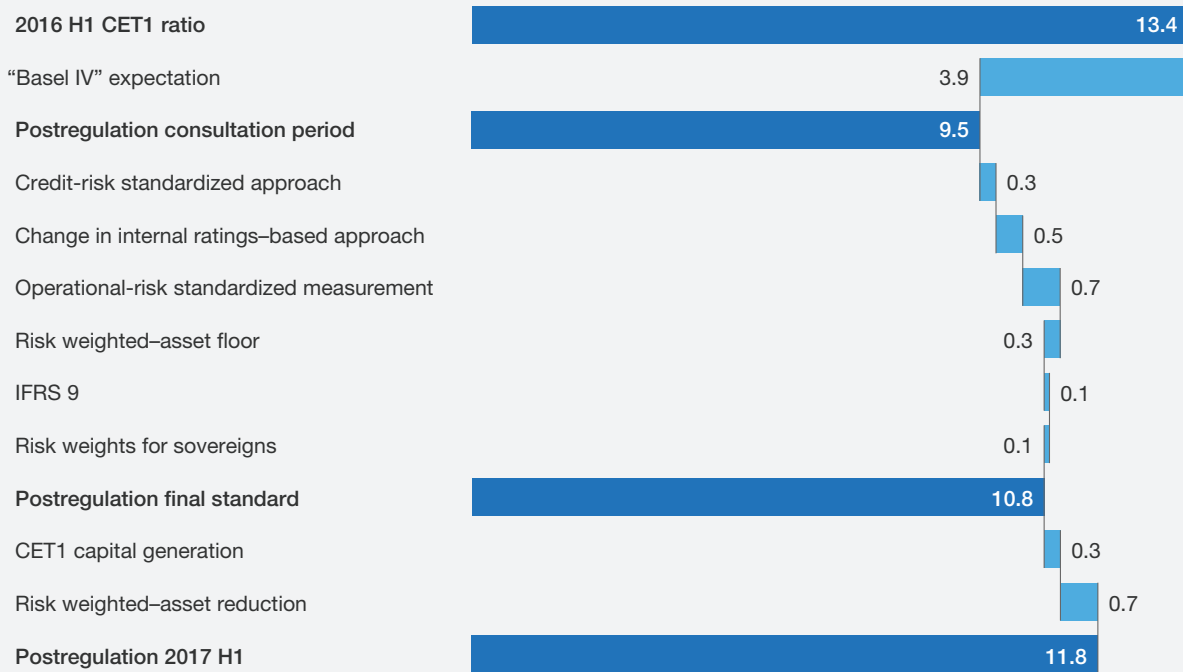
Note: IFRS 9 refers to International Reporting Standard 9; figures may not sum, because of rounding.

<sup>1</sup> If 4 banks marked as outliers are excluded, the impact drops to 0.3 percentage points.

Source: European Banking Authority transparency exercise; SNL Financials; McKinsey analysis

**Exhibit 3 The finalized Basel III regimen will have less impact on banks than had been expected during the consultation period.**

**Impact of common equity Tier 1 capital (CET1) ratio on European banks: consultation period vs finalized regimen,<sup>1</sup> %**



Note: IFRS 9 refers to International Reporting Standard 9; figures may not sum, because of rounding.

<sup>1</sup> Bank sample of 130 for 2016 H1 revised to 132 for 2017 H1; impact for CET1 capital generation and risk weighted–asset reduction might be distorted due to different banking samples used for the reconciliation.

Source: European Banking Authority transparency exercise; SNL Financials; McKinsey analysis

approximately 13.4 percent in mid-2016 down to 11.8 percent in the first half of 2017. This improvement of around 2.3 percentage points over our initial assessment is driven predominantly by the operational-risk SMA (0.7 percentage points) and changes to credit-risk methodologies, both for the IRB approach (0.5 percentage points) and the standardized approach (0.3 percentage points). The relief for the operational-risk standardized measurement approach results from the exclusion of the loss component, which we had assessed earlier. Improvements of the credit-risk approaches stem from the removal of the IRB adjustment factor

of 1.06, the application of the F-IRB approach for large corporates, as well as lower risk weights for corporates, institutions and mortgages under the standardized approach. The new consultation on sovereign risk under Pillar 1, including the revised standard approach, the removal of the internal ratings–based approach, and the add-on for concentration risk, does not appreciably change the impact estimates in the analysis.

Although we initially analyzed an aggregate risk weighted–asset floor of 75 percent, the floor calibrated at 72.5 percent now has a proportionally

# Differences in the McKinsey and the European Banking Authority assessments

McKinsey's assessment of the Basel III finalization on a standalone basis indicates a drop of around 1.2 percentage points in the common equity Tier 1 (CET1) ratio: from 13.5 percent to 12.3 percent (see Exhibit 2). The cumulative impact assessment of the European Banking Authority (December 2017) indicates a smaller drop, however, of around 0.8 percentage points, translating into a capital shortfall of €17.5 billion. If the standalone Basel III finalization is taken into account, the McKinsey estimate of the overall capital shortfall of €56 billion, which includes all regulatory effects, becomes only €2.2 billion. This smaller figure is based on CET1 minimum capital requirements plus global systemically important bank (G-SIB) surcharges, whereas the larger figure (€56 billion) also reflects Pillar 2 add-ons.

The differences between the European Banking Authority (EBA) assessment and our shortfall can be attributed to two factors: the two analyses use different banking samples and data from different points in time. For the McKinsey analysis, 132 banks were included, while the EBA used 88. More important, the EBA assessment was based on data through 2015 collected from individual institutions, whereas the McKinsey analysis is based on the latest data from the first half of 2017. As mentioned above, banks have significantly improved their CET1 ratio since 2015, resulting in more comfortable levels above regulatory minimums.

That the effects of Pillar 2 add-ons and capital buffers should result in two widely different assessments, of €56 billion and €2.2 billion, is notable, highlighting the room for national discretion during implementation. In Sweden and Norway, for example, supervisors are reflecting higher risk weights for mortgage loans in Pillar 2 capital requirements. Some analysts are therefore expecting that these add-ons will be removed, given that they are already captured by an internal model floor for mortgages under Pillar 1.

This example and others demonstrate the shift from global standards to national implementation discussions. Banking associations, especially in

the Nordic countries and Benelux, are in a position to argue for further risk sensitivity in European regulations. The Belgian supervisor recently decided to further increase internal-model risk weights by establishing a five percentage-point add-on for mortgage risk weights plus an additional multiplier of 1.33, effectively raising the internal-model mortgage risk weight from 10 percent to 18 percent. As a result, the capital requirements of Belgian institutions are expected to increase by €1.5 billion as these banks adapt early to the impact expected from the internal model floors under the final Basel III rules. Some national approaches will thus curtail the size of the impact. The Basel Committee has already encouraged impact-reducing approaches, by providing leeway for the operational risk loss component or the internal ratings-based (IRB) floor cap of 25 percent until final implementation in 2027.

Finally, it is important to keep in mind that the two assessments, McKinsey's and the EBA's, have different objectives. The McKinsey assessment sought a broad view of the regulatory impact, reflecting Basel III finalization, Basel III capital deductions, IFRS 9, and TLAC/MREL in the profitability analysis. Our analysis includes impact by country, bank size, and business mix, as well as a perspective on profitability. As stressed in McKinsey's earlier publications on "Basel IV," as well as in publications by the Institute for International Finance (IIF), a comprehensive and timely assessment of all regulatory effects is needed to provide transparency to the whole industry and prepare for national implementation discussions. An all-sided consideration is needed, in other words, to understand the impact of as many constraints as possible, on business lines and products as well as the implications for strategy and pricing. In this light, capital shortfalls should be assessed against total CET1 capital requirements, including Pillar 2, given the negative consequences of breaching those requirements.

larger impact on the CET1 ratio (approximately –0.3 percentage points). This is because the revised IRB methodology uses a lower level of risk-weighted assets, and under the standardized measurement approach, significantly lower operational risk-weighted assets work as a buffer for the aggregate IRB floor. Both effects lead to a higher impact from the aggregate floor, even calibrated at 72.5 percent.

Furthermore, the change (described above) to the latest available EBA transparency-exercise data set demonstrates that retained earnings (around

0.3 percentage points) and the reduction of risk-weighted assets (0.7 percentage points) have further contributed to the overall higher end-point CET1 ratio of the European banking sector (see sidebar, “Differences in the McKinsey and the European Banking Authority assessments”).

### Impact by country, institutional size, and banking sector

From country to country in Europe, the finalized Basel III standards and related initiatives will have different levels of impact on national banking sectors.

## Some observations on the impact among European, US, and Japanese institutions

Analyses by the BCBS and the EBA indicate that European institutions carry nearly 60 percent of the total CET1 shortfall globally. Two main forces are behind the shortfall concentration on European firms. First, US firms have fewer low risk-weight portfolios on their balance sheets (especially given the role in the United States of Fannie Mae and Freddie Mac), and their balance-sheet structures are less sensitive to floors. Second, the internal model floor may present less of a challenge for US institutions, since this floor already exists at 100 percent for the largest banks using the internal models under the Collins Amendment to the Dodd–Frank law. The standard approach and internal models are in fact similar with respect to consumed capital, despite the fact that operational risk and credit valuation adjustment (CVA) capital charges are reflected in internal models but not in the standard approach.

The new regulatory credit-risk standardized approach distinguishes between jurisdictions where external ratings for the calculation of risk-weighted assets are permitted and those where they are

not. The distinction gives US banks a structural advantage compared with their European peers. For demonstrated investment-grade exposures, the standards allow US banks to apply a risk weight of 65 percent for unrated corporates; European institutions by contrast would have to apply risk weights of 85 to 100 percent. This difference might cause some European institutions to stop offering certain capital-intensive products in certain regions.

The regulatory impact of the new standards on large Japanese banks appears to be comparable to the impact European institutions are facing. These banks also rely heavily on internal models and would be confronted with high standardized-approach risk weights for small and medium-size corporates. According to SMFG’s own estimates, for example, the bank’s risk weights are expected to increase by as much as 30 percent. Analysts expect the impact on Mizuho to be somewhat less (20 to 25 percent) and still less for MUFG (below 10 percent).

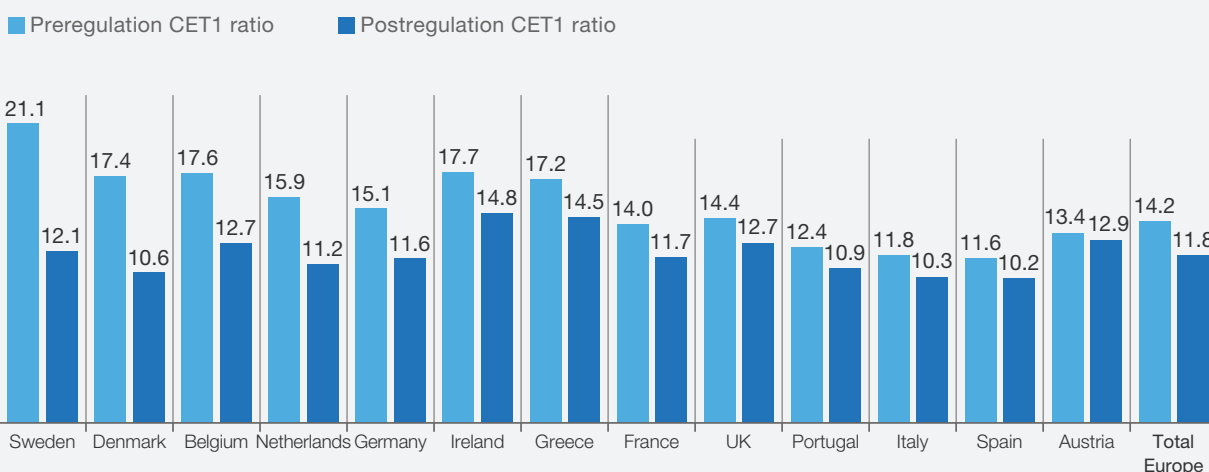


Measured in percentage points, the deepest drops in CET1 ratios will be experienced by financial institutions in the Nordic countries and Benelux: Sweden (9.0), Denmark (6.8), Belgium (4.9), and the Netherlands (4.7). Banks in these regions rely heavily on internal models that produce low risk weights. The effect of the finalized Basel III aggregate risk weighted–asset floor of 72.5 percent will therefore be a significant limit. Among the five largest European economies, Spain and Italy will be least affected by the reforms (1.4 and 1.5 percentage points, respectively). This is because the banking sectors in these countries place greater reliance on standardized approaches and produce overall higher risk weights under internal models (Exhibit 4).

In this context, our estimates for transitional phase-in arrangements indicate that some institutions in major European countries will feel the impact of the aggregate RWA floor of 50 percent on January 1, 2022. The impact will be particularly significant in Sweden (1.5 percentage points) and Denmark (0.6 percentage points). On the other hand, our analysis shows that the aggregate RWA floor will not be a binding constraint for Spanish institutions, even when it reaches its highest level, 72.5 percent, on January 1, 2027. The large impact of the final step-up, from 70.0 percent to 72.5 percent in the transition from 2026 to 2027, will be caused by a 25 percent cap on the impact of the RWA floor during the transitional phase—a new element of the revised standard.

**Exhibit 4 Sweden, Denmark, the Netherlands, and Belgium are among the countries most heavily affected by regulatory reforms.**

**Common equity Tier 1 capital (CET1) ratio: implicit weighted average, as of the first half of 2017, %**



Note: Without the impact of outliers in assessment of risk weights for sovereign exposure, postregulation CET1 would be 11.7% for the Netherlands (2 outliers) and 12.4% for Sweden (1 outlier).

Source: European Banking Authority transparency exercise; SNL Financials; McKinsey analysis

A closer look at the effects of the proposals for sovereign-risk weights under Pillar 1 reveals that the impact will be greatest at German, Dutch, and Swedish banks (0.7, 0.7, and 0.6 percentage points, respectively). This is an effect of large exposures in regional governments, which receive relatively high risk weights under the new mapping table. The impact on Southern European banks will generally be smaller than calculated in McKinsey's earlier analysis. Belgian banks too would be less affected under the new methodology, since the authorities have already asked banks to hold adequate capital for sovereign portfolios.

When examining institutions by total asset size, we confirmed the finding of our earlier reports, that larger institutions will experience greater impact from FRTB and operational risk SMA (0.4 and 0.5 percentage points, respectively). Small institutions might experience a slight overall impact from the final standard, mainly because of the higher risk sensitivity of the revised credit-risk standardized approach (an added 0.8 percentage points).

At the level of banking segments, the assessment reveals that the finalized Basel III standards will most affect regional and IRB retail banks (2.7 and 2.9 percentage points, respectively), as well as specialized institutions, where the impact is estimated at 7.8 percentage points—a drop from 19.3 percent before finalization to 11.5 percent after it. For universal banks, the approximate impact will be only 1.9 percentage points, thanks to their diverse business activities, a factor that reduces the overall effect of the output floor.

In line with the experience of small institutions, banks using the standardized approach will see little impact on their CET1 ratios. What impact they do feel will be mainly the result of a reduction in standardized-approach risk weights. Furthermore, the impact of Basel III finalization on profitability will probably be manageable, especially given the long transition period. This conclusion is consonant with the downward revision in the CET1 capital

shortfall, from €120 billion to €56 billion (see sidebar “Some observations on the impact among European, US, and Japanese institutions”).

### A holistic capital-management approach

Though the impact of the finalized standards will be less than initially expected, and the implementation timelines more relaxed, some institutions still face significantly diminished capitalization and risk missing their capital targets. Overall profitability will still decrease, furthermore, but the impact on individual businesses will differ. Profitability is affected not only by the finalized Basel III rules but also by the implementation of other regulatory programs. These require substantial investments and will constrain resources and budgets.

TLAC/MREL will have an impact on funding costs and balance-sheet composition, for example. RWA increases are linked to the resolution requirements of bail-in instruments defined by TLAC/MREL. The Single Resolution Board recently estimated that current MREL shortfalls for European institutions will be as high as €117 billion. This shortfall will become even greater, given its linkage to risk-weighted assets and the RWA inflation imposed by the finalized Basel III standards.

Such secondary effects demonstrate that banks need to take a holistic approach to capital management, rather than attempting to address the effects of each program in isolation. Implementing these programs will involve many different departments and functions within the bank and create steering demands that will define the structure of balance sheets and corresponding risks for a long time to come.

Against this background, European firms need to demonstrate their ability to generate sufficient additional capital while still paying dividends to investors. To achieve this level of financial resilience, the holistic approach to capital management described in McKinsey's “Basel IV” publications remains the best approach. The approach will involve

three transformational changes in capital steering and planning that will prepare banks for the new reality under the finalized Basel III rules.

- *Adjust performance management and capital allocation.* Some banks are responding by moving away from traditional target capital ratios based on return on equity/risk-adjusted return on capital (ROE/RAROC). They are instead adopting hybrid measures such as capital employed as a blend of CET1 capital requirements and leverage-ratio capital requirements. This involves considering the implications of the IRB floor and resulting constraints on the capital-allocation frameworks of business units, geographic regions, and products. Given the implied shifts in business-line profitability, furthermore, firms will probably need to review the allocation of other scarce resources, such as IT and HR budgets, and align with overall capital allocation.
- *Establish an approach that integrates financial planning and balance-sheet management.* The approach will enable banks to optimize their business mix and balance sheets simultaneously, against all implied regulatory ratios. These include regulatory capital requirements from Pillars 1 and 2, as well as bail-in funding requirements. Optimally, this integration will build upon a clearly defined and robust capital-allocation framework under the final Basel III rules. Balance-sheet optimization will mean much more than it does now. Given the significant shifts in profitability of business lines, customers, and products, European and Japanese institutions could consider new business models that pass through or distribute originated risks to investors. Balance sheets would thus begin to resemble North American-style balance-sheet structures.
- *Strengthen cost efficiency to meet capital-generation and dividend targets simultaneously.* Cost-efficiency targets could even be “reverse engineered” from optimized profit-and-loss and

balance-sheet assumptions. The cost-efficiency target would thus be based on optimized dividend promises and required capital generation. Firms whose operations are more cost efficient could thus find it easier to meet Basel targets. Scandinavian institutions, for example, exceed their German and French peers in efficiency, and despite being more heavily affected by the finalized standards, they are better positioned to meet them.

#### Capital steering, capital allocation, and performance management

The finalized Basel III standards could have significant implications for capital steering and allocation, including the performance component of the steering metrics banks use. For this reason, banks will have to reconsider their capital-steering and allocation approaches.

It is true that the sensitivity of the standardized approaches increased, leading to lower capital requirements. However, for those institutions constrained by the IRB floor, risk sensitivity decreased. In our sample, 35 percent of banks are constrained by the floor of 72.5 percent, meaning that for these institutions, economic and regulatory capital steering diverge. Furthermore, all IRB banks, whether constrained or not, will see a buildup of capital buffers arising from risk types or portfolios that are required to be under standardized approaches (including operational risk, credit-value adjustments, and equity exposures). Buffers of 27.5 percent resulting from the IRB floor are automatically improving the position of banks in the standardized versus the internal ratings-based approaches. The question arises, however, of how to reflect these effects in capital steering, allocation, and business steering.

Most important, banks using IRB approaches constrained by the IRB floor will have to decide how to allocate the additional RWA overhead among business units and products. Several fairly sophisticated approaches are theoretically possible—

such as steering by 72.5 percent of standardized RWA, distributing additional RWA according to the deviation of IRB and standardized-approach risk weights, or distribution based on an economic-capital approach. Banks must first keep an eye on the overall impact and consequences of their choices, however. Should a bank fail to distribute overhead RWA evenly, for example, with too much falling on a certain product type, the resulting price increases could be economically unjustified and lead the bank toward a noncompetitive position among peers. Further factors that banks need to consider and integrate into their response are the implications from existing capital and the new leverage-ratio buffers.

To steer capital and their businesses by the new requirements, banks will need to develop solutions according to their individual capital profiles. Banks constrained by the IRB floor might steer economically or create a strategic-decision tool that uses arising buffers for business steering. Institutions on the borderline of being constrained by the IRB floor should also review their steering mechanisms in light of the new requirements, taking into account different capital definitions while ensuring that capital will be appropriately allocated under all potential scenarios. Even banks not constrained by the IRB floor might consider revising their steering metrics, since those institutions face considerable capital demands from stress testing. Each bank will want to take a holistic approach to its own position to ensure that effects are judiciously diffused across all business segments. Rather than relying on minimum capital requirements alone, banks should also take into consideration the allocation of buffers and capital deductions.

In addition to distributing RWA overhead, banks will need to adjust key performance measures to the new regulatory environment. To be consistent, banks using risk-adjusted performance measures (such as RAROC) need to reconsider their calculation approach for expected losses. Banks

should develop a tailored solution from among several approaches—such as using IFRS9 estimates or IRB estimates, with or without parameter floors. In some cases, a bank might even consider changing its key performance measures to reinforce a reliance on economic capital. To comply with use-test requirements, furthermore, those banks would still need to demonstrate, in regulatory exercises like TRIM and model validation/approval, that internal-model parameters are used in steering.

Banks need to integrate these changes into the overall capital-steering process. This primarily includes capital allocation and the setting of hurdle rates, but may involve risk monitoring and risk-appetite statements as well. At this level, metrics and mechanisms should be transparent and well understood by the business units and all involved departments. Achieving a meaningful level of comprehension among the involved staff is not a simple, straightforward task, however, given the rising complexity of steering metrics. Banks must therefore be ready to invest the necessary time and resources.

### Balance-sheet management and financial planning

The finalized Basel III regime will thus introduce changes in capital requirements at the product level, requiring banks to reassess their business plans. It will also introduce new leverage-ratio buffers that could pose additional business constraints. As can be seen in Exhibit 5, the new rules on leverage ratios come in force on January 1, 2022. Banks should not, however, delay considering the regulatory requirements for new long-term business—under Basel III currently as well as under the finalized regime.

Given all other regulatory initiatives—including the liquidity coverage ratio (LCR), the net stable funding ratio (NSFR), and stress testing—the analysis that banks undertake must be multidimensional, integrating all aspects of the regulatory environment.

**Exhibit 5 Final Basel III postcrisis reforms: Implementation schedule and transition to the aggregate output floor.**

<b>Initiative</b>	<b>Implementation date</b>
<b>Revised standardized approach for credit risk</b>	<ul style="list-style-type: none"> <li>• January 1, 2022</li> </ul>
<b>Revised internal ratings-based floor (IRB floor)</b>	<ul style="list-style-type: none"> <li>• January 1, 2022</li> </ul>
<b>Revised credit valuation-adjustment framework</b>	<ul style="list-style-type: none"> <li>• January 1, 2022</li> </ul>
<b>Revised operational-risk framework</b>	<ul style="list-style-type: none"> <li>• January 1, 2022</li> </ul>
<b>Revised market-risk framework</b>	<ul style="list-style-type: none"> <li>• January 1, 2022</li> </ul>
<b>Leverage ratio</b>	<ul style="list-style-type: none"> <li>• Existing exposure definition: January 1, 2018</li> <li>• Revised exposure definition: January 1, 2022</li> <li>• G-SIB<sup>1</sup> buffer: January 1, 2022</li> </ul>
<b>Output floor</b>	<ul style="list-style-type: none"> <li>• January 1, 2022: 50%</li> <li>• January 1, 2023: 55%</li> <li>• January 1, 2024: 60%</li> <li>• January 1, 2025: 65%</li> <li>• January 1, 2026: 70%</li> <li>• January 1, 2027: 72.5%</li> </ul>

<sup>1</sup> Global systemically important bank.

At the same time, banks need to meet the expectations of investors and rating agencies, an obligation that would imply the creation of internal performance targets. The aim is to optimize business models according to a comprehensive view of the different restrictions and dependencies. The solutions should enable banks to derive an optimal balance-sheet structure, including directional balance-sheet steering impulses.



Once banks can think holistically about the finalized Basel III regime, as well as the full scope of other regulatory programs, they can proceed to align strategic and capital planning. Insights from internal and regulatory stress tests can be combined with fact-based projections to optimize the resilience of balance sheets in a range of scenarios. Implementation timelines aside, the time to begin integrating strategy and planning is here. ■

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<sup>1</sup> Stefan Koch, Roland Schneider, Sebastian Schneider, and Gerhard Schröck, "Basel IV: What's next for European banks?," April 2017, McKinsey.com; Stefan Koch, Roland Schneider, Sebastian Schneider, and Gerhard Schröck, "Bringing 'Basel IV' into focus," *McKinsey on Risk Number 4*, January 2018.

<sup>2</sup> "Regulatory equivalence and the global regulatory system," keynote address by William Coen, secretary general of the Basel Committee, at the International Financial Services Forum, London, May 25, 2017.

<sup>3</sup> Mortgage splitting allows banks to take advantage of lower risk weights and floors for low loan-to-value parts of mortgages — those booked, for example, within a fully owned covered bond subsidiary, while the bank takes the remaining unsecured part separately.

<sup>4</sup> The impact will vary depending on how banks apply the "unconditionally cancellable" clause to undrawn credit facilities.

<sup>5</sup> These estimates may be distorted by the different bank samples in the latest and the previous EBA transparency exercises.

<sup>6</sup> CET1 requirements include 4.5 percent CET1 minimum, 2.5 percent capital-conservation buffer, 2.5 percent Pillar 2 requirements, and bank-specific buffer requirements relating to global systemically important banks (G-SIBs) or other systemically important institutions (O-SII).

**Thomas Poppensieker** is a senior partner in McKinsey's Munich office. **Roland Schneider** is an expert in the Frankfurt office, where **Lennart Stackebrandt** is a senior knowledge analyst. **Sebastian Schneider** is a partner in the Munich office.

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