

Basel “IV”: What’s next for banks?

Implications of intermediate results of new regulatory rules for European banks

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Executive summary

Many European banks will face significant capital shortfalls under the so-called Basel “IV” reforms proposed by the Basel Committee on Banking Supervision (BCBS). The current state of the suggested changes (a mix of consultation papers and finalized standards) would rework the approach to risk-weighted assets (RWA) and possibly internal ratings, as well as set regulatory capital floors. According to our analysis, if banks do nothing to mitigate their impact, these rules will require about €120 billion in additional capital, while reducing the banking sector’s return on equity by 0.6 percentage points. This is a game changer for the European banking industry.

While other papers have studied Basel “IV”, this report provides a comprehensive perspective on the capital and profitability implications, with recommendations on how banks should react. It not only examines the latest status of BCBS changes (as per March 2017) but also considers post-financial efforts by the BCBS to harmonize capital calculations under Pillar 1. Our intermediate results are based on a consistent data set and consider the effects on a sample of 130 European banks drawn from the population of the latest EBA Transparency Exercise as of 2016.

In our view, the impact of Basel “IV” will be much greater than initially anticipated. Banks will need to raise more capital, and will likely have to take some unconventional measures to comply. The repercussions will vary, depending on banks’ geography and business model, and will require actions tailored to the individual bank’s circumstances. Potential phase-in arrangements are still under discussion (for example, today we foresee a gradual implementation of Basel “IV” rules once finalized from 2021 until 2025).¹ While final rules are still pending, banks should create transparency based on the expected rules, already define mitigating actions, and start implementing “no-regret” measures to appropriately manage the new rules as well as expectations of rating agencies and investors.

¹ See Huw Jones and Andreas Kröner, “New bank capital rules softened to ease European fears: sources,” Reuters, December 13, 2016, reuters.com

Beyond Basel III

1.1 Regulatory changes ahead

Basel III focused on enhancing the stability of the financial system by increasing both the quantity and quality of regulatory capital and liquidity. It increased capital thresholds by raising Tier-1 capital requirements to 6 percent from 4 percent, introduced buffers and leverage ratio requirements, and added the Common Equity Tier-1 (CET1) requirement of 4.5 percent.

After Basel III went into effect, the Basel Committee wanted to revisit transparency and consistency in risk measurements across approaches, jurisdictions, and banks. In 2014, the Basel Committee began issuing proposals to revise the credit risk standardized approach (SA) and simpler approaches for measuring operational risk leading to the proposal of a new standardized measurement approach (SMA) for operational risk in 2016. It also started a discussion on aggregated internal-rating model floors, concerned about the wide variability in RWA arising from banks' internal models. The Basel Committee had already begun negotiating a revised market risk framework, the fundamental review of the trading book (FRTB), for which a final standard was published in January 2016.

The changes covered in this paper are interim reflecting the latest discussions in the industry and are part of a Basel III amendment, more commonly referred to as Basel IV by now, a phrase we adapted in this article given its prominence of use in the industry. All of these changes will affect banks' regulatory capital requirements, even though the Group of Central Bank Governors and Heads of Supervision (GHOS) indicated that it did not intend to significantly increase overall capital requirements at an aggregated industry level. It did, however, acknowledge that the impact "may well be significant" for some banks.²

In addition, banks will also have to deal with further regulatory adjustments and discussions that are not directly affecting capital requirements under Pillar 1. These new mandates include, for example, risk data aggregation and IT (BCBS 239), the revised interest rate risk in the banking book standards (IRRBB), and the introduction of IFRS 9 accounting standards. This new regulatory environment will require banks to run large-scale implementation programs. Banks will need to make sure they have adequate resources to cover substantial one-off costs and provisioning needs. Moreover, additional capital requirements imposed by supervisors, such as during the EU Supervisory Review and Evaluation Process (SREP), will increase capital thresholds, and new loss absorbency requirements such as TLAC/MREL will result in higher refinancing costs from new issuance of eligible loss absorbing liabilities. All such efforts may impede organic capital buildup and increase capital thresholds that might be necessary to close Basel IV capital shortfalls in the next few years.

1.2 Need for a comprehensive view of regulations' coming impact

There are several reasons why it is difficult to derive a holistic perspective on the impact of Basel IV, including all interdependencies of upcoming regulations. The scope of a comprehensive future regulatory scenario is unclear, given the volume and uncertainty of regulatory consultations involved. There is no industry consensus on what the future regulatory scenario and its impact looks like. This is partly because Basel IV is not a

² See Bank for International Settlements (BIS), "Governors and Heads of Supervision announce progress in finalising post-crisis regulatory reforms," news release, September 11, 2016, bis.org; Stefan Ingves, "Reflections of a Basel Committee Chairman", keynote address, bis.org

single regulatory framework, but rather a collection of proposals and standards that will change how Basel III is to be implemented in the future. Interdependencies between individual regulations, different consultation cycles, and probably individual transition and grandfathering periods also hinder a full-picture view. This is why stakeholders often focus only on individual proposals without taking into account the overall number of changes in one final regulatory endpoint scenario.

Many previous Basel IV impact assessments and publications analyze only the effect of individual regulations or focus on specific industry segments or portfolios, such as our publications on FRTB or BCBS 239.³ Also, the BCBS has run multiple quantitative impact studies to analyze the impact of its regulatory proposals to decide about calibrations, but even these assessments are missing key elements, since they did not focus on single segments or business implications for different types of banks.

This report takes into account the full scope of the Basel IV rules and focuses on providing a comprehensive perspective on the capital and profitability implications, considering all BCBS attempts to harmonize capital calculations and reduce the variability in risk weights under Pillar 1.⁴ The full regulatory scenario is consistently applied to a sample of 130 banks drawn from the latest EBA Transparency Exercise as of 2016 and therefore reflects interdependencies between all proposals. In addition, our estimates reflect the latest loss absorbing capacity discussions at global (TLAC) and European levels (MREL) by imposing additional funding costs arising from new issuance of loss absorbing instruments.

Finally, on top of this global regulatory endpoint scenario, we analyze the impact of sovereign credit risk weightings based on external credit risk assessments and implementation of IFRS 9 for European banks. These topics are closely related to the ongoing BCBS debate. Even if not directly imposed by the BCBS, the IFRS 9 standard is one of the G20 commitments agreed on directly after the financial crisis to promote a stable financial system. At that time, the G20 formulated the recommendation to improve “accounting standards for provisioning, off-balance-sheet exposures, and valuation uncertainty”⁵. In contrast to mainly RWA-focused BCBS proposals, IFRS 9 will primarily reduce available capital due to the required changes in provisioning and, thus, affect capital ratios.

Exhibit 1 outlines our understanding of the major assumptions of Basel IV, which is commonly applied to the sample of 130 banks. This regulatory endpoint scenario is calibrated after any transition period and reflects the latest publicly known adjustments from the GHOS meeting in March 2017.⁶ These proposals include the revised standard for credit risk (SA), the standard measurement approach for operational risk (SMA), the review

3 Helmut Heidegger, Jared Moon, Anke Raufuß, Roger Rudisuli, Christian Raubenheimer, Daniel Härtl, “The Fundamental Review of the Trading Book: Implications and actions for banks,” December 2015, McKinsey.com; Holger Harreis, Matthias Lange, Jorge Machado, Kayvaun Rowshankish, and David Schraa, “A marathon, not a sprint: Capturing value from BCBS 239 and beyond,” June 2015, McKinsey.com

4 These include the revised credit risk SA, SMA, IRB review, IRB floors, and Fundamental Review of the Trading Book (FRTB)

5 See Group of Twenty’s “Declaration on Strengthening the Financial System – London Summit,” April 2, 2009, fsb.org

6 Currently, the industry expects that IRB capital floors will be phased in over five years, starting at 55 percent in 2020, rising by 5 percentage points per year to a maximum of 75 percent by 2025. See Jones and Kröner, “New bank capital rules softened: sources”

Exhibit 1: Key regulatory initiatives and assumptions of the Basel IV scenario analyzed for European institutions

Initiatives	Key scenario assumptions	Finalized Standard
Fundamental review of the trading book	<ul style="list-style-type: none"> Assuming standardized approach market-risk RWA increase by 80% and internal model market-risk RWA increase by 40% for international banks and 25% for regional banks 	✓
Revised credit risk standardized approach (SA)	<ul style="list-style-type: none"> Regulatory rating-based risk weights for banks and corporates Assumption: 5% of exposures fail due diligence Corporate SME exposure receives 85% risk weight Mortgage risk weights based on loan to values (LTVs); assumption: 20% of exposures dependent on cash flows of property Qualifying revolving and other non-SME retail receive 75% risk weight Equity and subordinated exposures risk weights range 150-250%; assumption average risk weight of ~200% 	✗
Removal IRB for low default portfolios (LDPs)	<ul style="list-style-type: none"> Financial institutions into F-IRB Large corporates (turnover >€0.5bn) into F-IRB Specialized lending remains under A-IRB Equity exposure into standardized approach 	✗
IRB RWA floor	<ul style="list-style-type: none"> Aggregate IRB output floor of 75% 	✗
Revised operational risk	<ul style="list-style-type: none"> Removal of advanced measurement approach (AMA) Application of standardized measurement approach (SMA) for all banks 	✗
IFRS 9	<ul style="list-style-type: none"> Impact on CET1 capital through retained earnings driven by provisioning based on revised expected-loss model 	✓
Risk weights for sovereigns	<ul style="list-style-type: none"> Application of standardized approach risk weights for exposures to sovereigns based on current S&P sovereign ratings 	✗

SOURCE: McKinsey; Basel Committee for Banking Supervision, www.bis.org/bcbs; International Accounting Standards Board (IASB), www.ifrs.org; Risk.Net

of IRB models, and an aggregated IRB floor (about 75 percent, fully phased in). Furthermore, the calibration takes into account likely regulatory adjustments and refinements publicly under discussion, such as incorporating calibration actions that have been raised by industry sources and regulatory policy experts close to the BCBS.⁷ These include a step back from the removal of IRB models for LDPs (corporations with total assets of more than €50 billion and financial institutions), higher F-IRB thresholds (about €500 million versus about €200 million in turnover), and continued application of advanced models for specialized lending. Finally, the scenario incorporates the implementation of new impairment standards, required under IFRS 9, and sovereign risk weighting based on external ratings (a more detailed description of analyzed regulations can be found in the Appendix). Although this is a likely regulatory endpoint scenario, it still represents an interim view as not all rules have been finalized yet.

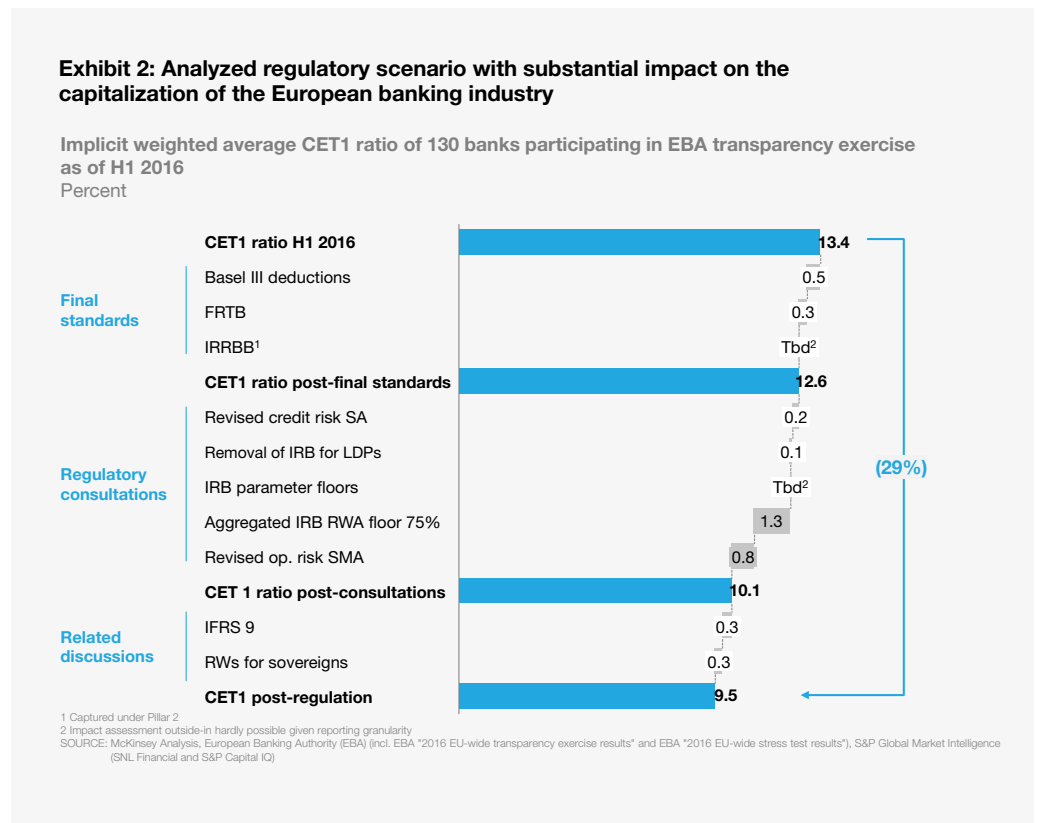
⁷ See Catherine Contiguglia, “Regulatory fragmentation drives Basel RWA impasse,” Risk, September 29, 2016, risk.net; Catherine Contiguglia, “Basel to allow IRB models for low-default portfolios,” Risk, September 14, 2016, risk.net; Bernd Neubacher and Andreas Heitker, “Basel Committee with agreements in principle on new capital rules for banks” (English translation), Börsen-Zeitung, December 13, 2016, boersen-zeitung.de

Expected capital impact for the European banking industry

2.1 Impact at sector level

Exhibit 2 summarizes the impact on regulatory capital for the European banking industry assuming no mitigating actions from banks. Our analysis indicates that current CET1 ratios of European banks would drop by 29 percent, declining from a 13.4 percent ratio now to 9.5 percent. The severest effect comes from IRB output floors, which would decrease CET1 ratios on average by about 1.3 percentage points. Other significant drivers are the new operational-risk SMA (0.8 percentage points) and Basel III phase-in (about 0.5 percentage points).

The analysis shows comparably low impact (about 0.3 percentage points) for the FRTB for the European banking sector. However, it is far more significant for major investment banks



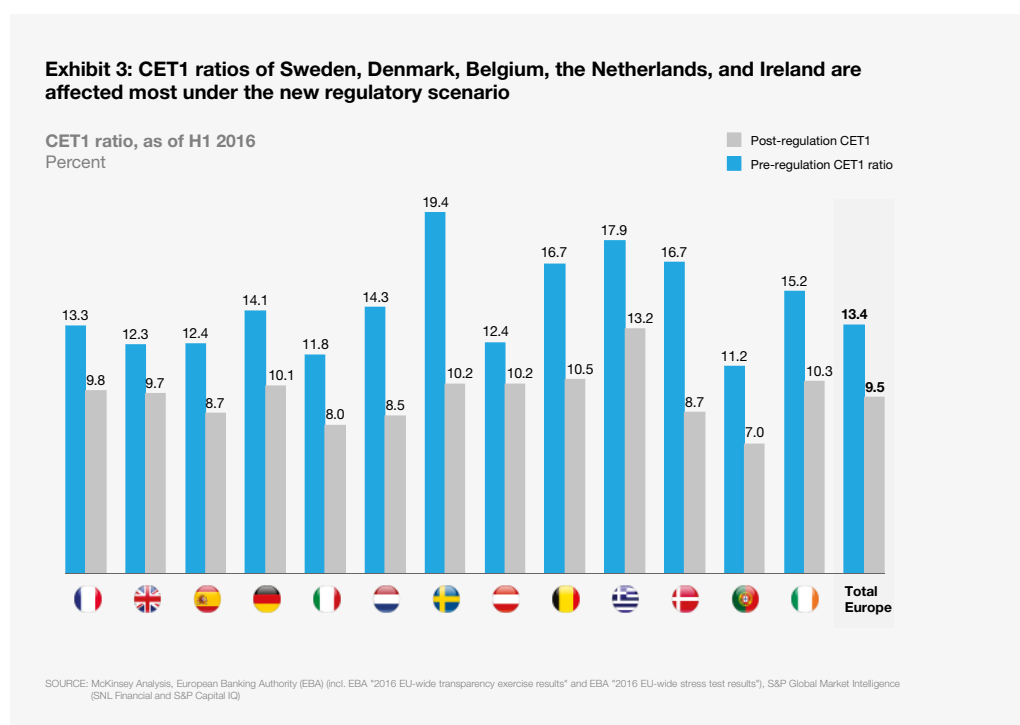
that are heavily affected by the new market risk rules. These estimates depend on whether banks will continue to use internal models for market risk. If they do not manage to meet the general criteria and qualitative and quantitative standards of the FRTB framework, we would expect a significantly higher impact, as they would move from an internal-model method to the standard approach.

Compared with an estimated CET1 requirement for European banks of about 10.4 percent, this would result in a capital shortfall of about €120 billion.⁸ In other words, EU banks would have to run down about €0.8 trillion in RWA to meet current regulatory CET1 requirements.

⁸ Weighted average regulatory CET1 requirements of 130 European banks, consisting of 4.5% CET1 minimum + 2.5% CCB + 0.5% CCyB + bank-specific SREP and G-SwIB buffers

2.2 Variations in capital impacts between geographies ...

Exhibit 3 demonstrates that CET1 ratios will differ from one European country to another. The greatest impact, in relative terms, will be felt by banks in Sweden, Denmark, Belgium, the Netherlands, and Ireland. Key drivers are IRB output floors, which significantly affect banks' corporate- and mortgage-lending portfolios. This is especially true in the Nordics and the Netherlands. Their banks' IRB models reflect low losses in mortgage portfolios, which means they will have relative low loss given default (LGD) estimates, and a need for more regulatory capital under the new rules. Among those countries with lowest absolute CET1 ratios post-regulation are Portugal (~7.0 percent), Italy (~8.0 percent), and Spain (~8.7 percent). Not surprisingly, these countries' banks suffer from increasing risk weights for sovereign exposures. In Germany, Spain, Portugal, and Ireland, banks are still grappling with significant Basel III capital deductions that phase in until 2019, ranging from ~0.9 percentage points in Germany to up to ~2.5 percentage points in Ireland. Operational risk SMA implementation and removal of AMA models would affect banks in France (~1.6 percentage points), the UK (~1.0 percentage points), and Italy (~0.8 percentage points) most. These results are driven by a high concentration of banks using sophisticated AMA models in Italy and France, and many large financial institutions within France and the UK suffering from the new size-based operational risk multiplier.

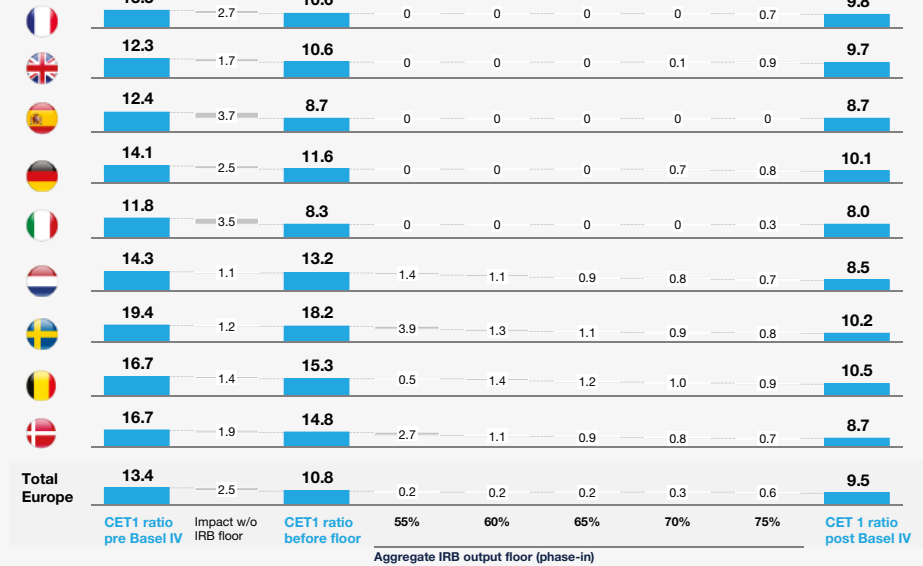


The IRB floor framework will be implemented gradually, from 55 percent in 2021 to 75 percent in 2025. Exhibit 4 shows the differences across countries when these floors become binding constraints. Banks from Sweden, Denmark, Belgium, and the Netherlands will see an impact immediately in 2021, with a 55 percent floor. German and UK banks will face the challenge in 2024 when the floor will be 70 percent. The floor will become binding at 75 percent in 2025 for many other countries such as France and Italy. In summary, Exhibit 4 illustrates that the IRB floor becomes binding at different levels depending on the country explaining the political conversation with regard to the final floor calibration.

Exhibit 4: Swedish, Danish, Belgian, and Dutch institutions affected by IRB floor from day one at 55%, followed by German and UK institutions at 70% in 2024

CET1 ratio, as of H1 2016

Percent



SOURCE: McKinsey Analysis, European Banking Authority (EBA) (incl. EBA "2016 EU-wide transparency exercise results" and EBA "2016 EU-wide stress test results"), S&P Global Market Intelligence (SNL Financial and S&P Capital IQ)

In comparison to this European perspective, US banks would be less affected than European banks, since they essentially already have a 100 percent standardized floor under Section 171 of the Dodd-Frank Act. US banks would have a smaller impact from changes in selected asset classes, for example, they typically have smaller mortgage portfolios as they offload their mortgages to Freddie Mac and Fannie Mae, and lower corporate exposure, since large corporates fund themselves more often directly through capital markets. Furthermore, US banks are also likely to face less significant increases in required operational risk capital given their current high capitalization levels for operational risk. According to an ORX analysis, US institutions' operational risk capital requirements would only increase by about 1-3 percent whereas European Institutions are hit hardest with an increase of 60-80 percent.⁹ With regard to IFRS 9, US institutions might face similar drops in capital from the Financial Accounting Standard Board's current expected credit loss model (CECL), which is the US equivalent of IFRS 9 implementation. The OCC expects loan loss reserves to increase by about 30-50 percent corresponding to a CET1 drop of about 25-50 basis points estimated by Fitch.¹⁰ Compared to these estimates the EBA revealed in its IFRS 9 impact assessment for European banks an increase in provisions of about 20-30 percent translating into CET1 capital decreases of about 50-75 basis points.¹¹ A summary of these estimates translated into a comparable US capital waterfall can be found in the Appendix in Exhibit 10.

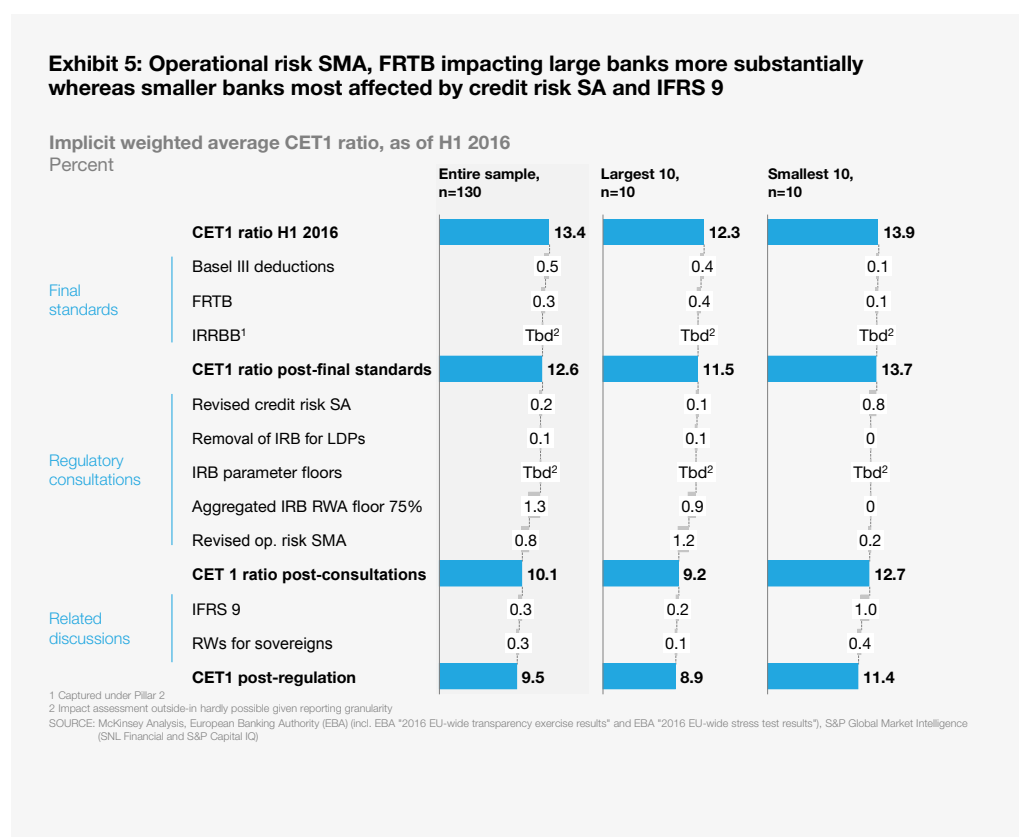
9 Capital impact of the SMA ORX benchmark of the proposed Standardised Measurement Approach, ORX, March 2016 <http://www.risk.net/risk-management/2460262/euro-banks-bear-brunt-eu115bn-sma-capital-hike-study>

10 <https://www.bloomberg.com/news/articles/2016-05-06/banks-face-new-rule-that-magnifies-loss-reserves-in-weak-economy>; <https://www.fitchratings.com/site/pr/1009172>

11 <https://www.eba.europa.eu/documents/10180/1360107EBA+Report+on+impact+assessment+of+IFRS9>; The respective waterfall for European banks includes a weighted average CET1 drop of about 0.3 percentage points given that large financial institutions are less affected than smaller institutions

2.3 ... size of institution ...

Exhibit 5 summarizes the impact of institutions depending on their size. Large financial institutions measured by total assets are more affected by the new Basel IV rules, especially by the FRTB impact (~0.4 percentage points) and operational risk SMA introduction (~1.2 percentage points) including AMA model elimination. On the contrary, the impact on the sample of the smallest ten institutions indicates that these institutions are more affected by the revised credit risk SA and IFRS 9. Due to the revised credit risk SA and IFRS 9, the CET1 ratio of smaller banks drops by ~0.8 percentage points and ~1.0 percentage points, respectively.



2.4 ... and business model

The capital impact varies for different business segments within the overall EU banking sector (Exhibit 6). Our analysis shows that SA retail banks are less affected than specialized institutions, IRB retail banks, and regional banks.

Specialized institutions' CET1 ratios would decrease most, from 17.8 percent to about 9.0 percent (a drop of about 50 percent), followed by IRB retail institutions and regional banks (declining about 32 percent). Driving this decrease is the capital floor for IRB, as IRB retail banking institutions currently have significantly lower risk weights—for instance, for mortgages—than the suggested SA risk weights at an IRB floor of 75 percent. For example, wealth management firms running large retail security-backed lending books (Lombard loans) may face significant increases in capital requirements if their secured low-risk-weighted assets are bound to a capital floor of other retail loans that have been designed for consumer finance. For some firms, this means their respective risk weights could increase tenfold.

Exhibit 6: Capital impact would be significantly better for SA retail banks than for specialized institutions and regional banks

Implicit weighted CET1 ratio, H1 2016
Percent

	Total EU sample, n=130	Universal banks, n=12	Regional banks, n=23	Retail banks (IRB), n=23	Retail banks (only STA), n=24	Specialized institutions, n=5
Pre-regulation	13.4	12.1	13.8	14.6	12.9	17.8
Final standards	Basel III deductions	0.5	0.5	0.4	0.6	0.3
	FRTB	0.3	0.4	0.3	0.2	0.1
	IRRBB	Tbd	Tbd	Tbd	Tbd	Tbd
Regulatory consultations	Revised credit risk SA	0.2	0.1	0.2	0.2	0.6
	Removal of IRB for LDPs	0.1	0.1	0.1	0.1	0
	IRB parameter floors	Tbd	Tbd	Tbd	Tbd	Tbd
	Aggregated IRB RWA floor 75%	1.3	0.7	2.2	2.2	0
Related discussions	Revised op. risk SMA	0.8	1.0	0.6	0.9	0
	IFRS 9	0.3	0.3	0.3	0.3	0.7
	RW for sovereigns	0.3	0.2	0.3	0.2	0.5
Post-regulation	9.5	8.8	9.3	9.9	10.3	9.0

SOURCE: McKinsey Analysis, European Banking Authority (EBA) (incl. EBA "2016 EU-wide transparency exercise results" and EBA "2016 EU-wide stress test results"), S&P Global Market Intelligence (SNL Financial and S&P Capital IQ)

A less significant drop is observed at retail banks applying purely the credit risk standardized approach (about 20 percent) and at universal banks (about 27 percent). These retail institutions do not suffer from restrictive IRB model floors, while universal banks benefit from their portfolio and business diversification.

2.5 Expected impact on ROE

The average European bank's return on equity (ROE) would drop from 8.0 percent to 7.4 percent, assuming no mitigating actions and that banks plan to keep Basel III fully-phased capital requirements (Exhibit 7).¹²

This decline will mostly affect ROE for universal banks and specialized institutions, with a drop of about 1.0 percentage points, from 8.3 percent to about 7.3 percent and from 6.3 percent to about 5.3 percent, respectively. This stems from a moderate RWA increase under Basel IV, combined with high CET1 requirements due to additional buffers reflecting the institutions' size, complexity, and interconnectedness for universal banks. Specialized institutions face lower capital requirements but are more heavily affected by the RWA uplift under the new regulatory environment.

IRB retail banks are less affected, given their higher starting position. Their ROE drops by about 0.1 percentage points and they remain the most profitable institutions, with post-regulatory ROEs of about 10.0 percent. Even though their CET1 ratios drop more significantly than in other segments, their lower CET1 requirements and relatively high current capitalization keep their additional capital needs in line.

12 ROE defined as annualized operating pretax return on equity as of H1 2016

Exhibit 7: All banks are expected to take a hit to return on equity (ROE), but retail banks less impacted than average

Implicit weighted operating pretax ROE, H1 2016

Percent

		Entire sample, n=130	Universal banks, n=12	Regional banks, n=23	Retail banks (IRB), n=23	Retail banks (only SA), n=24	Specialized institutions, n=5
2019 CET1 capital requirement		-10.4	-11.0	-10.8	-10.5	-10.1	-9.8
Percent							
	Pre-regulation	8.0	8.3	9.5	10.1	1.1	6.3
Final standards	Basel III deductions	0	0	0	0	0	0
	TLAC/MREL	0.2	0.2	0.1	0.1	0.4	0.1
	FRTB	0	0	0	0	0	0
	IRRBB	Tbd	Tbd	Tbd	Tbd	Tbd	Tbd
Regulatory consultations	Revised credit risk SA	0	0	0	0	0	0
	Removal IRB for low-default portfolios	0	0	0	0	0	0
	IRB parameter floors	Tbd	Tbd	Tbd	Tbd	Tbd	Tbd
	Aggregated IRB RWA floor 75%	0	0	0	0	0	0.7
Related discussions	Revised op. risk SMA	0.2	0.6	0.1	0	0	0
	IFRS 9	0.2	0.1	0.2	0	0	0
	RW for sovereigns	0.1	0.1	0.2	0	0	0.2
	Post-regulation	7.4	7.3	8.9	10.0	0.7	5.3

SOURCE: McKinsey Analysis, European Banking Authority (EBA) (incl. EBA "2016 EU-wide transparency exercise results" and EBA "2016 EU-wide stress test results"), S&P Global Market Intelligence (SNL Financial and S&P Capital IQ)

Regional banks, which see their ROEs drop by 0.6 percentage points down to 8.9 percent, find themselves between universal and IRB retail banks in terms of ROE as their business mix represents both types of business.

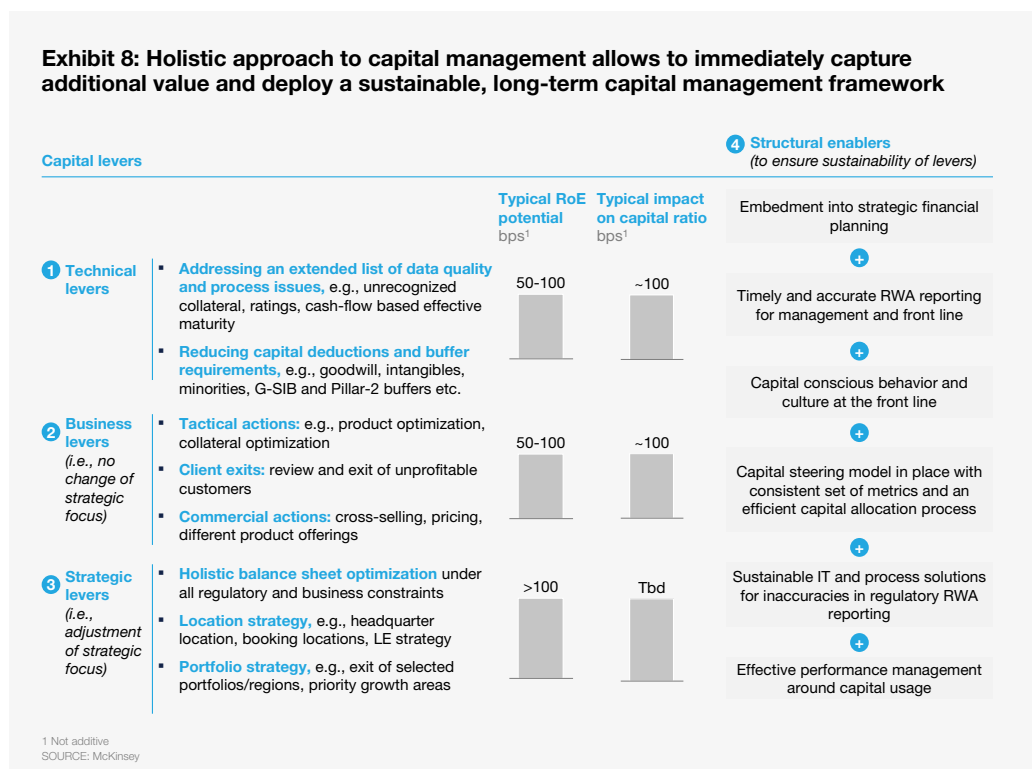
In comparison, credit risk standardized approach retail banks face ROE decreases (about 0.4 percentage points) solely driven by new loss absorbing capacity requirements. This is due to their high current capitalization levels and SA applications. Nevertheless, pre-regulatory as well as post-regulatory ROEs are very low in absolute terms for standardized retail banks and clearly below cost-of-capital targets.

Implications and reactions: How banks can react

3.1 Mitigating actions

This chapter provides an overview of potential mitigating actions. As the impact of new regulations will vary between geographies and bank type or business model, there is no one-size-fits-all approach. For instance, banks with focused business models and significant output floor impacts will have to adjust their business mix or massively go off balance sheet. Banks with a more diversified portfolio still have to shift, but probably have a chance to work with a high number of smaller mitigation actions. In order to develop a strategy of mitigating actions, there is some very rigorous thinking required to minimize Basel “IV” impact.

In the following we outline the key elements of a structured approach to achieve a best-in-class capital management strategy under Basel “IV”. This would include technical levers to increase RWA accuracy and improve regulatory capital (for example, by reducing capital deductions); business levers to increase capital efficiency/profitability, especially of the back book; strategic levers to adjust the business model to the new regulatory environment and enablers to ensure that the applied levers are sustainable going forward (Exhibit 8).



Technical levers

Industry evidence indicates that accuracy in RWA calculations could be improved everywhere, as data quality is insufficient and data usage is incomplete (for example, collateral gets “lost” from the front-office systems to the RWA calculation engine).¹³ Correcting RWA accuracy and processes often reduces RWA under both the SA and the IRB approach, and helps to mitigate unwanted RWA increases before triggering

13 Erik Lüders, Max Neukirchen, and Sebastian Schneider, “Hidden in plain sight: The hunt for banking,” January 2010, McKinsey.com; Capital management: Banking’s new imperative, November 2012, McKinsey.com

more extreme measures, such as exiting business lines. While many banks have already conducted a first round of boosting RWA accuracy, for most banks there is still a significant opportunity to reduce RWAs and improve economic profit. Even for banks with solid data accuracy in their IRB portfolios, further improvements are often possible. Technical levers can be implemented in the short term, typically do not require significant investments, and create significant impact. An RWA reduction of €1 billion typically corresponds to an increase of economic profit by €10-15 million.¹⁴

While many banks have focused on RWA accuracy, there has been little emphasis on reducing other capital drivers, such as capital deductions (minority interests, goodwill, intangibles, nonconsolidated investments, etc.), capital buffers (G-SIB, Pillar-2, countercyclical buffer) and trapped capital. For some banks, the Pillar-1 requirements contribute less than 50 percent to the total capital need; the remainder is impacted by these other capital drivers. Banks should consider several no-regret moves to bolster capital. They include increasing RWAs in entities with CET1 excess (such as moving securitizations from one entity to another), netting intangibles and goodwill deductions with linked deferred tax liabilities and reviewing activation policies and amortization periods of expenses related to intangible assets. Some banks have already started to improve capital more holistically. One global bank increased its capital ratio significantly by correctly classifying intangible assets, applying netting procedures in deferred tax assets and deferred tax liabilities to properly reflect goodwill and pension fund deductions, and adjusting its legal entity setup and asset booking locations in line with minority interest deductions. Another global bank significantly reduced its RWAs by changing the regulatory treatment of one of its major participations. In close alignment with the national regulator, the bank managed to move from a look-through approach calculating the RWAs of the assets of the participation to the CRR/CRD IV approach of considering the RWAs and capital deductions of the participation itself. Overall CET1 ratio at group level improved by about 1 percentage point driven by an RWA decrease at group level of more than 10 percent countered only by CET1 deductions of about 5 percent of overall CET1.

Business levers

While the improvement of RWA accuracy does not affect revenues, the application of business levers focuses on increasing capital efficiency. Business levers might slightly reduce revenues but at the same time release capital demand in a way that both overall profitability and capital efficiency increase. There are three types of business levers:

1. Tactical levers: Tactical levers slightly adjust the current product offering or the requirements for a deal to make it more capital efficient for the bank. Examples are collateral optimization, which could include obtaining more collateral, maximizing collateral allocation or product optimization, decreasing unutilized lines, adjusting contract clauses (committed versus uncommitted, or maturity clauses), or pursuing product swaps, especially for limits such as overdrafts and revolvers.

2. Improving low profitability clients: Generally, there are two options to improve profitability for low-performing customers: Renegotiate the customer's current deals or exit the customer relationship. To make this successful, banks could:

¹⁴ Assuming a capital ratio of 13-14 percent and cost of equity of approximately 10 percent

- Refine and prioritize lists of underperforming clients (for instance, establish proper thresholds per segment)
- Analyze underlying drivers and identify applicable profitability levers for each client; define “menu of options” for relationship managers (RM); develop initial hypothesis on exit versus turnaround
- Identify “sacred cows” up-front (liquidity providers, international relevance, high revenues)
- Define top-down RWA, capital efficiency and cross-selling targets based on applicable levers defined at region, country and relationship manager level
- Compile and approve client action plans jointly with relationship manager, including quantified impact, binding timeline
- Introduce principle of “up or out”, for instance, “automatic” short-listing for exit
 - Define acceptable capital efficiency level and turnaround timeline to execute proposed action plans
 - Clearly communicate that if target profitability is not achieved in time, exit plan would take effect
- Establish tight governance and monitoring mechanism to oversee and follow through
 - Definition and approval of RM action plans: weekly or biweekly monitoring at country level
 - Perimeter portfolio performance management: biweekly monitoring at regional level
 - Program coordination and progress reporting: monthly monitoring at central level
- Provide clear guidelines and toolkit to RMs (targets, suggested levers by client, action plan templates, communication material)
- Assign senior sponsors with shared responsibility for large/priority clients
- Expand scope to the front book through e.g., a new deal committee, to evaluate new deals against proper profitability thresholds and levers for specific target segments and clients

3. Commercial actions: Banks should also consider commercial actions to ensure that they continue to meet client needs while also increasing capital efficiency. This includes:

- Adjusting product offerings, given that selective products become less attractive after capital costs (except for products that remain critical for customer relationships). For instance, calculation of risk weights for mortgages/commercial real estate will become dependent on loan to value (LTV) going forward. Current residential risk weights of 35 percent could be only maintained for exposures with LTV of less than 80 percent. For exposures with LTV of up to 90/100 percent, higher risk weights of 45/55 percent are applicable and introduce substantial cliff effects into the risk weight function. Some institutions might stop offering mortgage/real estate products above a certain LTV threshold or close to the thresholds of risk weight buckets.

- Increasing appetite for financial collaterals and guarantees: One difference between internal rating-based models and the credit risk standardized approach is the eligibility of collateral. Internal models can reflect credit risk mitigation from nonfinancial and physical collateral. Once a floor framework based on applicable standardized approach risk weights is introduced, banks might prefer financial collaterals or guarantees eligible under both the IRB and SA framework to reflect credit risk mitigation in the applicable floors. Guarantees of highly rated counterparts will become more important compared with physical collaterals due to deviation of economic and regulatory credit risk mitigation. Banks should review their collateral management frameworks/policies/processes and align front-office incentives to properly reflect this new appetite for financial collateral and guarantees.
- Repricing and cost management: Banks should assess the future profitability of their existing businesses based on the expected impact of the new regulatory requirements, especially in the product areas that are affected most, such as mortgages and commercial real estate exposures. They may want to explore opportunities to amend prices or reduce operating costs to make up for increased capital costs.
- Cross-selling: Banks should also look for opportunities to increase their cross-selling of fee-based products that do not create any additional capital charge.

To implement these business levers, the bank's front line needs to understand the key drivers for capital efficiency and align them with their incentives.

Strategic levers

The new regulatory requirements provide an opportunity for banks to rethink their portfolio of businesses, as well as individual business models. Few banks have begun to review business activities to spot areas that, even after mitigation efforts, will be capital drags in a Basel IV environment. Banks with less sophisticated models might suddenly become competitive in terms of capital cost in certain product classes, given that internal models are restricted by applicable floors. This will increase competition and margin pressure for banks serving segments like specialized lending, where banks using slotting or standardized models faced significantly higher capital charges. Banks with less sophisticated models might carefully consider entering these markets.

Reviews of business activities should be done from the top down, based on a thorough understanding of how the new capital requirements affect each segment and product in both the current cycle and under stress scenarios. Understanding the interdependencies and trade-offs among business segments – and under different regulatory constraints – is crucial.

First, banks need to create transparency on divisional contributions to scarce regulatory resources (capital, funding, and liquidity) and their consumption. This is a complex task that should not be underestimated. Some of the required metrics are typically not found in existing IT systems in a consistent, ready-to-be-used state. To fully understand the balance sheet at a group level, banks need to be able to quantify the aggregated impact of divisional and product characteristics – only then can they figure out how to adjust the balance sheet to optimize performance. Several leading banks have started to use advanced modeling and optimization approaches to understand the evolving regulatory requirements. This process

is typically interactive, in that strategic direction and business mix define the parameters of the modeling, and the model can help quantify feasibility and implications of a chosen strategic direction. Once the review is complete, the businesses that remain in the portfolio must adjust their business models to the new capital realities. Some businesses may require only small adjustments, while others will be fundamentally changed.

Banks should also undertake these strategic reviews:

Update portfolio strategy: Banks should systematically examine their capital allocation to each client segment and geography to ensure that capital is preferentially allocated to areas that generate higher returns—adjusted for risk, funding, and increased capital costs. On top of the traditional view that considers segment growth and economics, the attractiveness of client segments should be also evaluated by required capital/capital efficiency. Such an assessment should not only be based on the current economic cycle but should also consider the impact of a stress scenario to mitigate “tail risks”. After the evaluation, banks could scale back business with segments and geographies that do not add economic value—such as those that account for a big share of the bank’s RWAs without returning the cost of capital.

Review legal entity setup: Many banks are already questioning the number of legal entities in their structure in light of resolvability requirements. Reducing the number of subsidiaries typically leads to substantial capital and funding savings—and to a more limited degree cost savings, better transparency, and improved governance. While many local supervisors prefer subsidiaries to better control risk exposures and balance sheets, supervisors are also in favor of simpler legal structures. To decide the right legal entity setup, banks must take into account:

- Regulation/legal impact, such as the supervisory relationships in both the parent and local markets, as well as regulatory requirements for subsidiary status (for example, pressure in terms of recovery and resolution planning)
- Financial and operating mode impact: Capital and liquidity consumption (distribution of excess capital/liquidity), tax efficiency, access to local funding versus centralized treasury and free liquidity flow, direct operating model and cost impact
- Client impact/strategy: Strategic priorities, positive image of home country (stable banking system, higher deposit insurance) versus positioning as “local” bank, repapering
- Implementation: Governance structures and reporting/control functions, license transfer, operational risk during the transition phase, communication

UBS recently announced it had merged its activities outside France, the UK, and Switzerland into a newly created entity. The bank’s former legal entities in Italy, Spain, Luxembourg, and the Netherlands, as well as the Luxembourg entity’s branches in Austria, Denmark, Ireland, and Sweden, all become branches of the new European institution. UBS said it was foregoing its banking licenses in all the legal entities but one, facilitating banking supervision. The merger allows simplification of governance structures and increases operational efficiency. It will save an estimated 10 percent in operational costs, as well as about €1 billion,

enabling further investments in IT infrastructure and digital offerings to European clients.¹⁵ Nordea simplified its legal structure by changing its Norwegian, Danish, and Finnish subsidiaries to branches of the Swedish parent company. The bank intends to decrease its administrative complexity and establish more efficient operations.¹⁶

Strengthen originate-to-distribute muscle: European banks have significantly fewer assets outplaced than US banks. This is because most EU banks follow a largely traditional buy-and-hold model. Creating more balance sheet flexibility through distribution of assets to yield-searching buy-side firms, such as insurance companies, pension funds, or asset managers, enables banks to manage capital requirements with more flexibility. This can reduce the impact of Basel IV requirements by outplacing assets with high risk weights. To implement this, banks must create an asset base that fits buy-side needs with respect to risk-return and duration profiles. They must also understand specific needs of Solvency II-regulated investors to build asset pipelines, optimize collateralization, price accordingly, and leverage low-margin portfolios for outplacements.

Structural enablers

While the above-mentioned levers focus on increasing capital efficiency and profitability, they do not ensure that these measures are sustainable. The challenge for many banks is that they often fall back to previous bad habits (for instance, data fixes to improve RWA accuracy no longer work after several years or the front office again sells inefficient products). The following practices will ensure that efforts to improve capital efficiency become part of the bank's infrastructure:

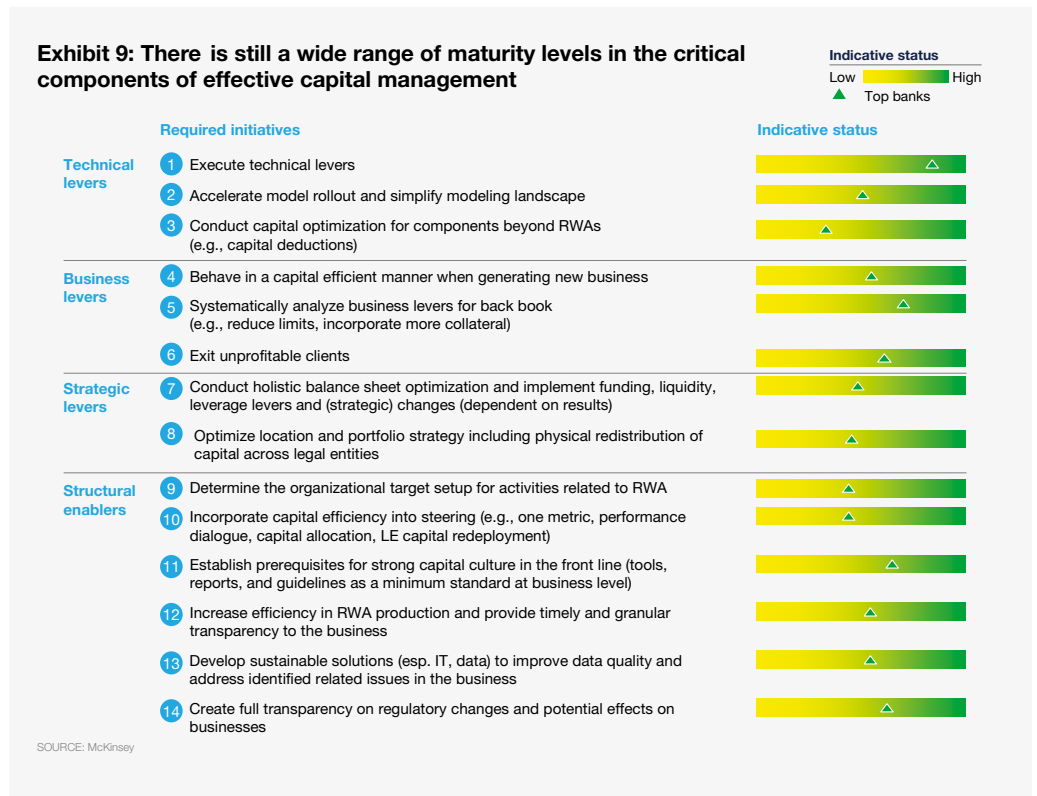
- **Embedment into strategic planning:** Many banks are still not set up properly in terms of organization and systems to have the discussions that are necessary to integrate strategic/tactical levers into strategic planning processes. Important areas operate in silos, with insufficient communication across the institution. This problem is magnified at international banking groups that need to engage with subsidiary boards, while also taking into account local regulatory and group-level constraints. Strategic planning processes in most banks need to be upgraded to achieve this new level of coordination. Once the target balance-sheet structure has been defined, these new measures must become part of the bank's internal steering and planning processes.
- **Timely and accurate RWA reporting for management and front line:** Banks should have full transparency on their RWA development as well as an understanding of key drivers for RWA changes and overview of the forward-looking pipeline. In order to ensure this transparency, banks need an efficient RWA production linked to well-structured RWA reports that are dependent on manual adjustments to a limited degree.
- **Capital conscious behavior and culture at the front line:** The front line in many banks does not have a deep understanding of the key drivers of capital consumption for a specific business. To change this, banks must build capital management capabilities throughout the bank. These can include creating new RWA guidelines, instituting specialized front-line training, developing front-office tools to calculate the RWA impact

15 https://www.ubs.com/global/en/about_ubs/media/emea/releases/news_display_media_emea.html/en/2016/12/01/europe-se.html
<http://www.handelsblatt.com/my/unternehmen/banken-versicherungen/europa-bank-gegruendet-ubs-beschert-frankfurt-einen-triumph/14920176.html?ticket=ST-16452256k7DIFfpHKqKaZYL0ZqM-ap4>

16 <https://www.nordea.com/en/about-nordea/corporate-governance/legal-structure/nordea-legal-structure/>

of each business, setting capital-efficiency-based targets and making capital efficiency a key criterion for new business decisions.

- **Capital steering metrics:** Banks should define a consistent and new set of capital steering metrics. While there is a broad set of available metrics in the industry¹⁷, many do not set incentives to efficiently use capital and allocate it between different legal entities and segments. Steering metrics need to be embedded into a consistent capital allocation framework that incorporates regular mechanisms for reallocation of capital and an approach to consistently cascade down targets/hurdles to regions/countries, business unit, etc.
- **Sustainable IT and process solutions for RWA inaccuracies:** While most banks have conducted a first round to improve RWA accuracy, many banks still can benefit from significant data and process improvements in RWA calculations. Banks should make sure that root causes are identified and resolved for all RWA inaccuracy issues (data flow/IT issues, methodology issues, process issues, etc.).
- **Effective performance management around capital usage:** Banks need to anchor the right incentives into RM scorecards to ensure their behavior is capital efficient. This could be achieved by integrating the above-mentioned capital steering metric(s) into the scorecard, creating a direct link between incentives and targets of different segments/legal entities and RMs.



17 For example, RoE, RoRWA, RoTE, EVA, RoAE (Return on attributed equity), RoRaC, etc.

Each bank's capital management plan is different. To determine the most relevant areas that need improvement to mitigate the capital impact of Basel IV, we recommend a short diagnostic. Exhibit 9 summarizes our experience with the banking industry's progress in implementing key elements of capital management measures. While most banks have already done well in improving RWA accuracy (by eliminating data errors, improving processes), they need more work to optimize capital beyond RWAs, and implement strategic levers and enablers to ensure sustainability of RWA reductions (embedding balance sheet optimization into strategic planning, selecting the right capital steering metrics, educating the front line on capital consumption, etc.).

While we have identified certain measures, banks may want to consider, they must recognize that there is no one-size-fits-all approach. As the impact of new regulations varies between geographies and bank type or business model, institutions should make bank-specific impact assessments, identifying which portfolios and business segments are most affected. This requires an individual bank to examine its sensitivity to the new regulatory rules, so it can react quickly and reflect new business economics early in its strategic considerations. Measures will also need to be bank specific, well analyzed in advance, and rigorously implemented. Even if potential phase-in periods (for instance, the gradual implementation of the IRB capital floor from 2021 to 2025) might provide some more flexibility for adjustments and implementation, banks need to develop a mitigation plan immediately for forward-looking market participants such as rating agencies and investors.

3.2 “No-regret” actions until Basel IV rules are finalized

As final Basel IV rules are still pending, banks are still in a vacuum to define a strategic response to the new rules. However, there are a few “no-regret” actions that are impactful independent of the final regulatory outcome and can provide banks with a timely edge relative to competitors:

Technical levers

Correcting RWA accuracy and processes often reduces RWA under both the SA and the IRB approach and will be beneficial under any regulatory outcome. At the same time, it does not require high investments and is relatively easy to implement. Similarly, technical levers beyond RWAs, such as capital deductions (minority interests, goodwill, intangibles, nonconsolidated investments, etc.), capital buffers (G-SIB, Pillar-2, countercyclical buffer) improve capitalization independent of the final regulatory outcome.

Business levers

As capital will likely become an even more valuable asset for most banks independent of the final regulatory changes, a stronger focus on capital efficient business, for example, instead of a pure “revenue” focus should be targeted under each regulatory scenario. Therefore, banks should already start implementing tactical levers (for example, require more collateral, decrease unutilized lines, adjust contract clauses) and increasing profitability of low-profitability customers. However, banks should wait for the final regulatory changes before implementing commercial actions, for example, adjusting product offerings or conducting repricing as it depends on the implied capital costs of final rules.

Strategic levers

A comprehensive strategic review of the current business model under the new regulatory rules should be conducted once the final rules are published. While most strategic levers are obviously dependent on the outcome of the strategic levers, there are even selected strategic levers that help improve the risk-return profile in any scenario, for example, build originate-to-distribute capabilities to create more balance sheet flexibility through distribution of assets to yield-searching buy-side firms.

Strategic enablers

Increasing a capital conscious behavior of the front line aligned with the right incentives, ensuring that RWA fixes are sustainable, applying the right capital metrics, etc., are at the heart of an effective capital management. Independent of the details of final rules, banks should already start implementing these enablers.

Appendix

Regulations assessed in our regulatory endpoint scenario include the following set of global BCBS consultations and related regulatory discussions. Additionally, we consider further regulatory initiatives as outlined after the global rules.

Global rules analyzed

Capital floors (BCBS 306/BCBS 362). Replacement of the transitional Basel I floor framework with a new capital floor based on the SA: the floor is meant to mitigate model risk and measurement error stemming from internally modeled approaches. It would enhance the comparability of capital outcomes across banks and ensure that the level of capital across the banking system does not fall below a certain level. The BCBS announced a calibration range of the floor of 60-90 percent.

Credit risk standardized approach (BCBS 347). Adjustment of the credit risk SA to appropriately reflect riskiness of exposure. It increases comparability of capital requirements under the credit risk SA and the IRB approaches and reduces reliance on external ratings. (For exposures to financial institutions and corporates, banks must perform due diligence on their counterparties to assess the reliability of the external rating; for real estate exposures, a new regulatory-risk weight-mapping table is introduced, focusing on the loan-to-value ratio.)

Fundamental review of the trading book (BCBS 352). Strengthening capital standards for market risk—in particular, by better capturing tail and liquidity risks and by fostering a consistent implementation of standards at the intersection of the banking and trading books. This becomes effective by 2019.

Operational risk standardized measurement approach (BCBS 355). Revised standard for operational risk, replacing all existing operational risk measurement approaches. This new standardized measurement approach (SMA) mainly consists of a revised business indicator, new size-based risk coefficients instead of segment-based risk coefficients, and a loss component that accounts for observed operational losses.

Reduction of variation in RWA (BCBS 362). Revisions to the advanced IRB and the F-IRB approaches. The proposals include complementary measures that aim to reduce complexity, improve comparability, and address excessive variability in the capital requirements for credit risk. Among other measures, the BCBS considers removing the option to use the IRB approaches for certain exposures (for instance, financial institutions, large corporations, and equities), where it is judged that the model parameters cannot be estimated sufficiently reliably for regulatory capital purposes. Furthermore, proposals include adoption of exposure-level, model-parameter floors to ensure a minimum level of conservatism for portfolios where the IRB approaches remain available and to provide greater specification of parameter estimation practices to reduce variability in risk weights.

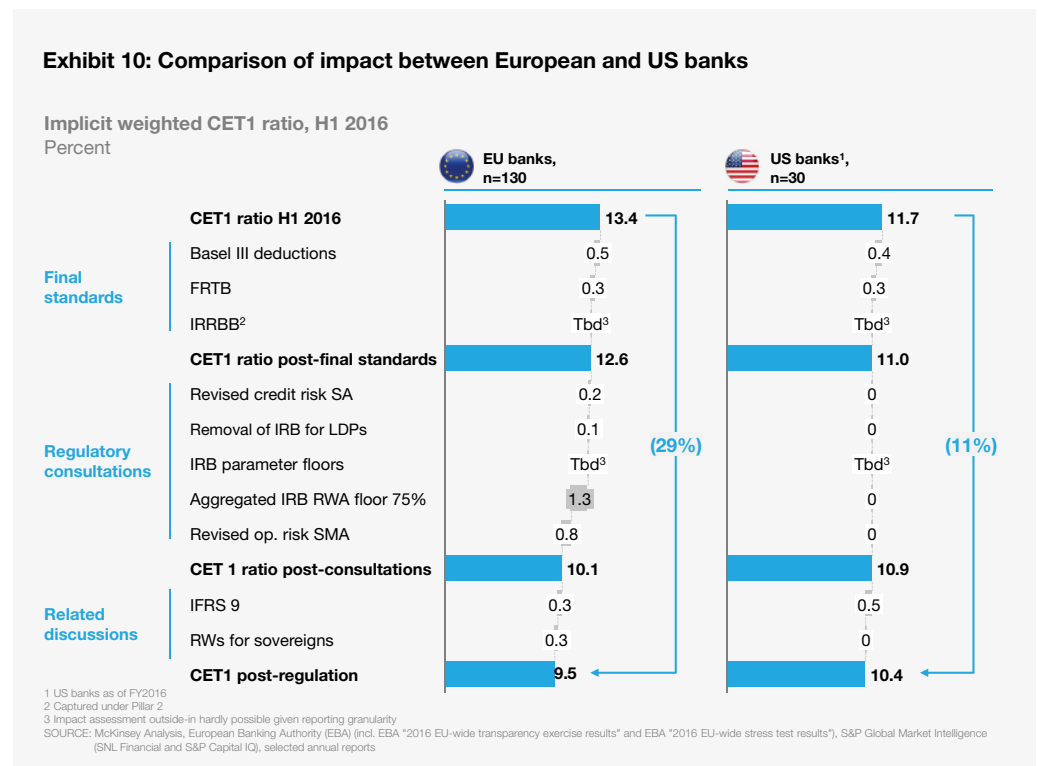
Further regulatory initiatives

Risk weighting of sovereign exposures. Introduction of regulatory capital requirements for banks investing in governments solely based on external ratings: in the EU, IRB approach banks are allowed to treat their sovereign exposures permanently under the SA rules. Under the current credit risk SA, a zero risk weight applies to sovereign exposures regardless of

their denomination and funding currency as long as the counterparty is an EU member state.¹⁸ For now, the BCBS has explicitly excluded this kind of debate from its revised credit risk SA consultations.

IFRS 9. Replacement of the current accounting standard IAS 39 for financial instruments and introduction of a new framework for classification, impairments, and hedge accounting, becoming effective in 2018. Introduction of lifetime expected loss and earlier provisioning might require substantial risk IT adjustments and increase of current provisioning levels.

Supervisory review and evaluation process (SREP). Harmonization of Pillar-2 supervision of all institutions across the EU. It ensures that institutions have adequate arrangements, strategies, processes, and mechanisms as well as capital and liquidity to ensure sound management and coverage of their risks, including those revealed by stress testing.



18 See Bank for International Settlements (BIS), "BIS Quarterly Review", December 2013, p.10-11, bis.org

Methodology

The following table outlines key assumptions of our impact estimations for the different regulatory portfolios revealed in the EBA Transparency Exercise 2016.

Consultation/ final standard	Portfolio	Assumptions
Revised standardized approach (SA) for credit risk	Banks and corporates	Risk weights are modeled based on underlying external ratings and due diligence to ensure that the rating properly reflects the underlying risk of the exposure. It is assumed that 5 percent of total exposures fail the due-diligence requirement and need to be backed by a higher risk weight. Corporate SME exposure receives a risk weight of 85 percent.
	Mortgages	Risk weights are based on regional loan-to-value (LTV) statistics for commercial and retail exposures. It is assumed that 20 percent of the exposure is highly dependent on the cash flow of the underlying property.
	Regulatory retail	Qualifying revolving retail exposure and other non-SME retail exposures receive a risk weight of 75 percent.
	Other retail	All other retail exposure will be risk weighted at 100 percent.
	Equity	Equity and subordinated debt exposure risk weights range from 150-250 percent; assumption: average risk weight of approximately 200 percent is applied to these exposures.
Capital floor for IRB		Risk-weighted asset (RWA) floor of 75 percent, based on aggregated RWA level. The scenario is set up as regulatory endpoint scenarios (fully phased in after any transition period).
Fundamental review of the trading book (FRTB)		SA market risk RWA increase by about 80 percent and internal-model approach market risk RWA from internationally active and regional banks increase by about 40 percent and about 25 percent, respectively.
Operational-risk standardized measurement approach (SMA)		Bank-specific business indicators estimated using publicly available profit and loss information. Loss component estimated by using industrywide aggregate gross-loss/gross-income figures, as well as publicly available bank-specific operational-loss observations.
Risk weights for sovereigns		Risk weight for sovereign EU exposure according to external rating of the country.
IFRS 9		Only reflection of capital effect from provisioning. No operational implementation costs or ongoing costs included.
Loss absorbing capacity (TLAC/MREL)		Reflection of higher funding cost of new issued loss absorbing instruments. Only banks' shortfalls in loss absorbing capacity will be filled with these new instruments.

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