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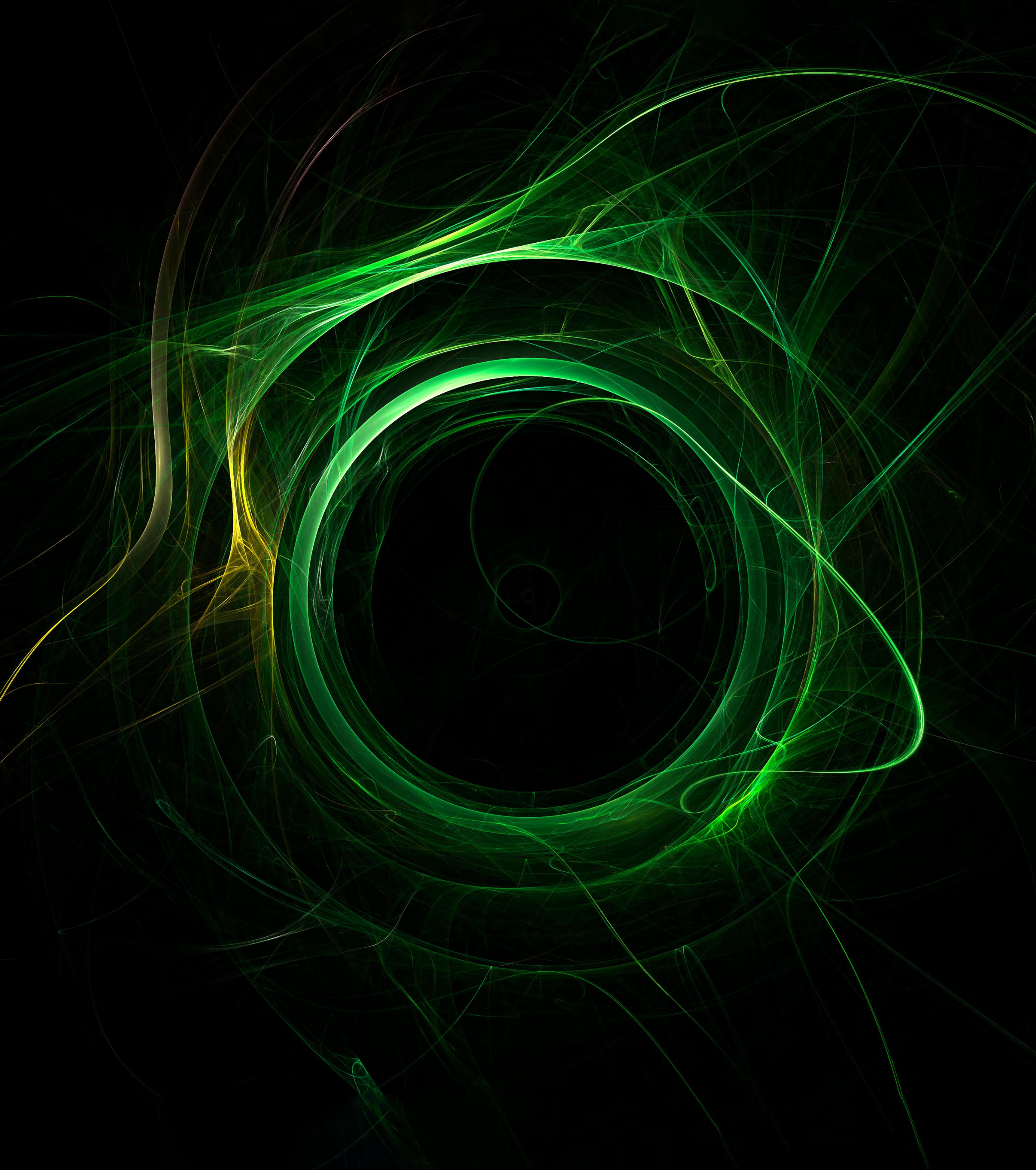

Basel III/CRR III Survey 2023

Impacts and challenges

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Management summary

The finalisation of the Basel III capital framework will lead to significant changes in capital requirements. Several quantitative impact studies, carried out by regulatory bodies, indicate that for most banks capital requirements will in fact increase. Since the implementation deadline is approaching, banks must prepare for the new regulatory framework.

In mid-2022, Deloitte set up a survey to assess the state of preparation in banks, to which 52 institutions from Europe and the Asia/Pacific region responded. These banks cover various business models and sizes, although small institutions are underrepresented.

We express our thanks to all banks who supported this survey. In addition, we want to thank RSU GmbH & Co. KG for their valuable input in setting up the survey and discussing the results.

In summary, banks should ensure they kick-off the implementation projects in time. Our survey has shown that necessary adjustments often go beyond updating their RWA calculation and regulatory reporting engines. Many banks expect strategic impacts and/or significant adjustments to the IT environment, which will take time to prepare and execute. Since compliance is mandatory, adequate resources will be required to achieve good and timely results.

The more detailed outcome based on our international sample can be summarized as follows:

Capital impact:
- The overall change in capital requirements is very much in line with previous analyses.
- The results are quite divergent. While a fortunate few expect capital relief, most banks will be facing – sometimes significant – increases in their capital requirements.
- The impact on banks in the EU seems to be more unfavourable than elsewhere.

Drivers for these changes typically vary from bank to bank:
- In the standardised approach, results for real estate lending are varied: Some banks expect higher capital requirements, while other banks expect a significant capital relief for this portfolio. Equity positions are also a driver for increased RWAs for some banks. The same is true for off-balance sheet positions.
- In the foundation IRBA, the revised regulatory LGD values lead to lower capital requirements. However, the input parameter floors regarding PD, LGD, and CCF offset this relief.
- Market risk and CVA are of lesser relevance for most banks. Banks with major trading activities nonetheless cannot neglect these areas as the new rules typically lead to higher capital requirements.
- For operational risk there is no clear picture. About one quarter of the participants expect an increase in capital requirements. Roughly just as many have concluded that the new rules will bring capital relief. Individual analyses will be needed to understand the impact for each institution.
- The impact of the output floor is expected to be most significant for real estate lending, followed by corporate lending and retail lending in third position. Since only a few banks use internal market risk models for regulatory reporting, the output floor typically does not affect the trading book. Again, for those banks using internal market risk models, these can also contribute to the output floor impact. Ultimately, all banks need to fully understand the impact of the output floor, as it will change the market.

Strategic impact of the future capital requirements:
- More than 60% of the respondents see a need for action in the context of capital planning and pricing. However, only very few have already made significant progress in this area.
- Roughly a quarter indicated that internal capital allocation will have to be adjusted. Consequently, many banks expect to re-design some products or re-align the portfolio.
- Finally, more than 10% of the banks see the need to adjust their entire business model, although the client base will not be affected for most banks.
- Only a few banks in the sample have assessed the potential for portfolio and/or RWA optimisation under the new rules.

Implementation of the new rules:
- Projects will quite likely require structural adjustments to the IT environment.
- While the reporting solutions obviously need to be adopted, one out of seven banks sees the need for fundamental changes to risk and finance data and/or the reporting IT infrastructure. A similar number expect to change their entire reporting solution.
- Only 30% of respondents do not see any need for structural adjustments of the regulatory reporting infrastructure.
- Typically, banks expect the biggest need for change in the context of the new standardised approach for credit risk. This includes the newly introduced due diligence process for the use of external

ratings. The exposure to value calculation for real estate financing is also a major hurdle to regulatory compliance.

- Other topics, such as the identification of specialised lending or transactors in retail lending as well as implementing risk mitigation techniques, are not typically expected to be a major issue.

Finally, since the new rules tend to be a game changer, the previous choice of regulatory approaches might no longer be ideal. Based on the responses received, the changes to the IRB coverage ratio make the IRBA more attractive for banks currently using the standardised approach for credit risk. The ability to use pooled data and/or pooled models will further help to put the IRBA in reach for more banks. Of those banks that may use the IRBA in the future, the availability of such pooled solutions would have a positive impact on their decision to apply for the IRBA.

IRBA banks face a different problem: Due to the output floor, broader IRBA coverage offers little or no RWA benefit. Reducing the number of IRBA compliant rating models is thus a feasible option to become more cost efficient. Hence, many IRBA banks in our sample are currently considering reverting from the IRBA to the standardised approach, especially for those portfolios where defaults are scarce and difficult to model (e.g., central governments/central banks, public sector entities or financial institutions).

In summary, there is no doubt that credit rating models are more important than any other internal risk model especially since OpRisk models can no longer be used for Pillar 1 purposes. Nonetheless, regulators will still expect appropriate risk models to be used for the internal capital adequacy assessment process (ICAAP).

Overall, the results show that at the time of the survey (mid-2022) most banks had not started their implementation projects, but most banks had plans to kick-off implementation projects no later than 2023. In light of the complex implications of the new rules expected by the institutions in our sample, banks should be aware that while a later start of implementation activities will benefit from greater regulatory clarity it leaves less time to understand and mitigate the drivers of the expected changes and comes at the cost of a shorter implementation project timeline.


Senior Engineer
Advanced
Research and Development

Regulatory framework and data basis

Regulatory developments and planned entry into force of the revised requirements

The global financial crisis of 2007/2008 prompted the Basel Committee on Banking Supervision (BCBS) to fundamentally revise the capital requirements framework for banks. After initially addressing the most obvious deficiencies of the framework in the short term ("Basel 2.5"), the BCBS took a closer look at regulatory capital adequacy. At the centre of these deliberations was the question of which capital instruments should be recognised as capital for regulatory purposes and how much capital an institution requires. In December 2010, the set of rules known as "Basel III" was adopted by the BCBS and further improved upon in July 2011.[1]

The supervisory authorities represented in the Basel Committee undertook to implement the rules nationally. In the EU, this was accomplished via the Capital Requirements Regulation (CRR),[2] which became directly applicable as an EU regulation. This created a largely uniform set of rules across the EU which came into force in 2014. The capital buffer requirements introduced as part of the abovementioned regulations led to institutions having to hold significantly more own funds on average than under the previous rules.

The revisions to risk measurement, i.e., the "conversion" of the portfolio into minimum capital requirements, were tackled by the Basel Committee over a longer period of time. It was not until December 2017 that the new framework was finalised by the BCBS.[3] The Basel Committee has referred to the changes as the "finalisation of Basel III". The terms "Basel IV" and "Basel 3.1" are also used in public to refer to the new capital adequacy rules. In this report, the terms Basel III, Basel IV and CRR III are used synonymously unless reference is made to a specific document.[4]

Originally, the changes to risk measurement were to come into force on 1 January 2022. However, as a result of the COVID 19 pandemic, it was decided by the BCBS in March 2020 to postpone this go-live by one year.[5] Internationally, however, only Australia has implemented the rules with effect from 1 January 2023, and even their implementation was not complete. The EU Commission, as well as the United Kingdom, are aiming for implementation on 1 January 2025 – i.e., a delay of two years. As at the end of February 2023, the US regulators had not published their consultation on Basel IV.

The impact studies carried out by the BCBS and other bodies[6] show consistently that the new rules are likely to lead to an increase in capital requirements. Implementation in the EU will take place via an amendment of the CRR ("CRR III"). It is currently expected that the negotiations at European level will be concluded over the course of 2023. However, if the political decision-making process takes longer, institutions will have little time for the technical implementation of the final regulations, which may make it necessary to postpone the initial application in the EU once again.

One reason for the increasing capital requirements is the higher risk sensitivity of the revised (and now mandatory) standardised approaches, as well as the more limited benefit from the use of internal approaches and risk models in the future, in particular due to the new so-called "output floor". However, increasing risk sensitivity means that, depending on their business model and approaches used for regulatory purposes, there are also institutions expecting lower capital requirements under the new rules.

This shows that it is essential to analyse and address the new rules on an institution-by-institution basis and that individual solutions must be developed to address the economic and strategic implications of the regulatory changes.

The purpose of this Deloitte survey, supported by the RSU,[7] on the finalised Basel III rules is to shed light on the current implementation status as well as the impacts and implications for the institutions surveyed. It provides all institutions that have to implement Basel III or CRR III with insights into the identified challenges and potential strategies to address these.

Survey design and data basis

This survey was performed in the second and third quarters of 2022. More than 50 institutions from 14 different countries participated.[8] While the majority of the responding institutions comes from Germany (22), 24 institutions from 11 other European countries and 6 institutions from the Asia-Pacific region are also represented (cf. fig. 1).

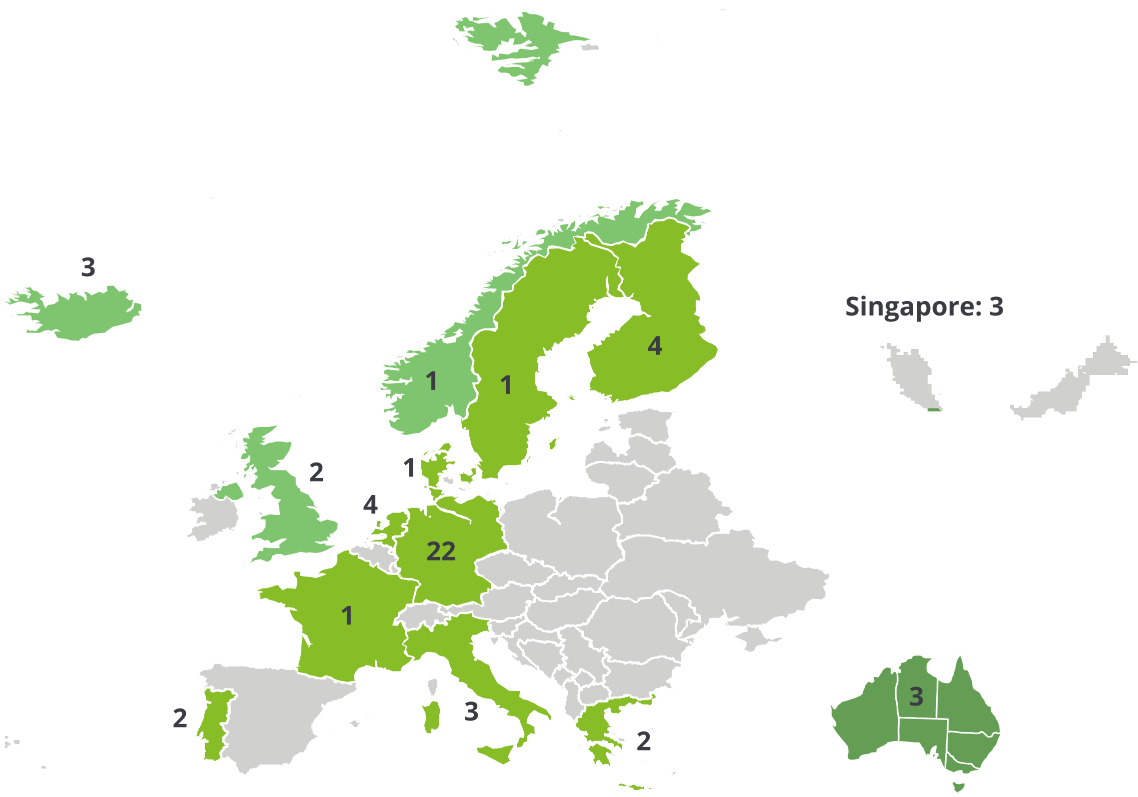
With regard to the size of the institutions, the sample exhibits a broad spread between small, medium and large institutions. While 20 institutions have a balance sheet total of less than EUR 30 billion (of which five have less than EUR 10 billion), 20 institutions with a balance sheet total between EUR 30 and 250 billion and 12 institutions with a balance sheet total of more than EUR 250 billion are represented in the analysis (cf. fig. 3). For reasons of consistency and comparability, institutions with a balance sheet total of less than EUR 5 billion and institutions that do not represent the institution at the highest consolidation level within a jurisdiction were not included in the survey. An evaluation according to the business model shows even coverage across all major business areas. Here, as expected, the cross-border universal banks (18) form part of the largest institutions and the locally active universal banks form part of the smaller to medium-sized institutions (17). The category of other institutions (17) is distributed across almost all size classes and essentially includes specialised institutions such as real estate and automobile financing, as well as the development banking sector (cf. fig. 2).

The regional distribution of the participating institutions primarily represents Germany and the EU. The distribution by size and business model is balanced. Only small institutions are underrepresented.

An evaluation of the approaches used to calculate RWA shows that, while 22 of the institutions exclusively use standardised approaches, 30 institutions also use internal models to determine the capital requirements for at least one risk type. The majority of internal models for which regulatory approval has been granted for Pillar I purposes (28 institutions) are internal ratings-based approaches (IRBA) and internal models for quantifying market, counterparty default and operational

Fig. 1 – Respondents by region

The majority of participating institutions are from **Germany (22 out of 52)**. Other countries with 3 or more participants include the **Netherlands (4)**, **Finland (4)**, **Italy (3)**, **Iceland (3)**, **Singapore (3)**, and **Australia (3)**. Aside from the 46 European institutions (of which 40 are EU and 6 non-EU), 6 institutions from the Asia/Pacific region participated.



risks (cf. fig. 4 bottom left). Of the 28 IRBA institutions, 22 use internal estimates of PD, LGD and CCF for their retail business and 12 for portfolios outside the retail business. By contrast, 16 of the institutions in the sample apply the "Foundation IRBA", in which they are only permitted to use the PD for the RWA calculation for portfolios outside of the retail business sector (cf. fig. 4 bottom right)

Overall, our international sample of 52 institutions incorporates a broad cross-section of different institutions in terms of size, business model and use of internal models. The following evaluations of the results of the study thus provide insight into how the new regulatory requirements affect institutions from different perspectives. Where surveyed institutions' responses differ depending on these characteristics, that context is considered in the corresponding sub-sample analyses.

Fig. 2 – Business model

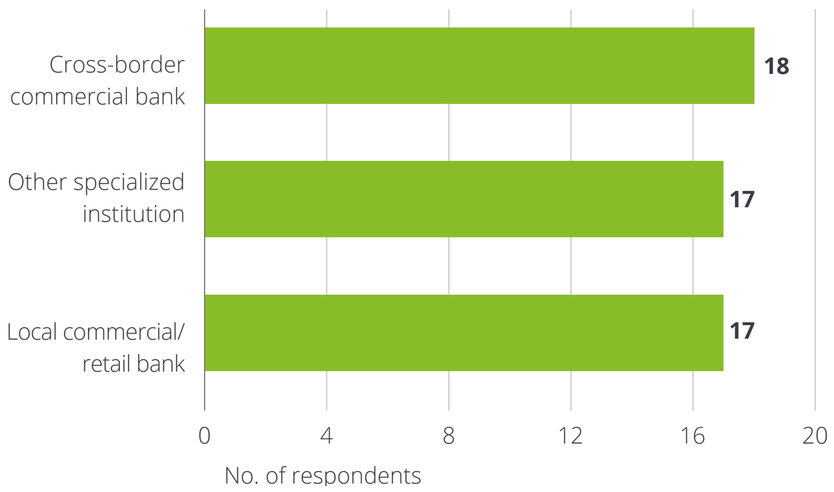


Fig. 3 – Respondents by total assets

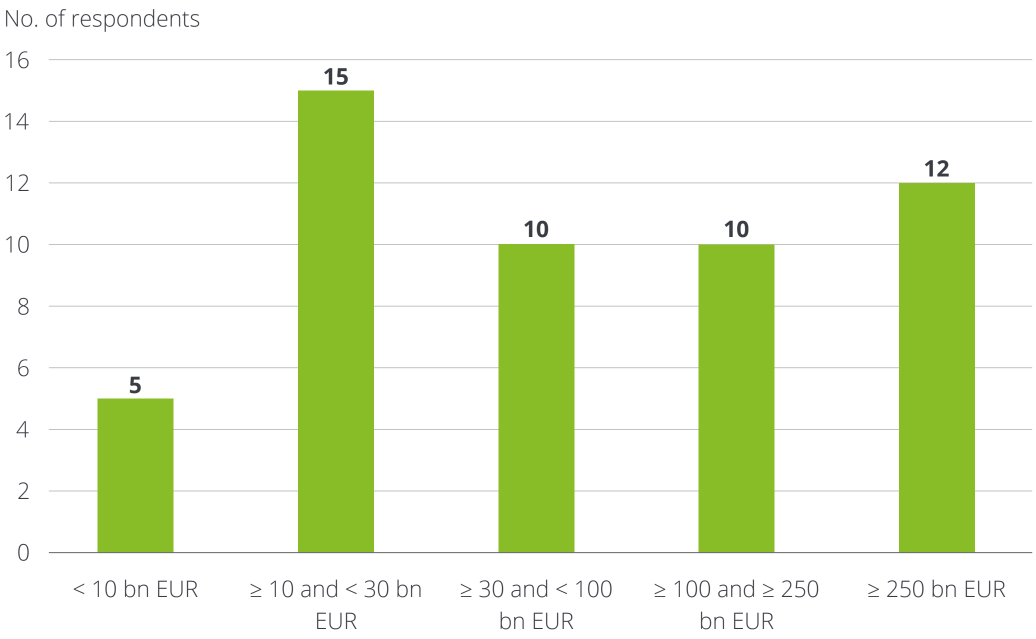
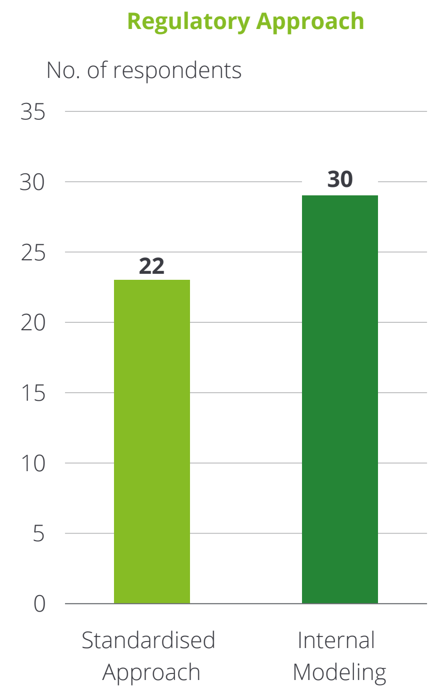
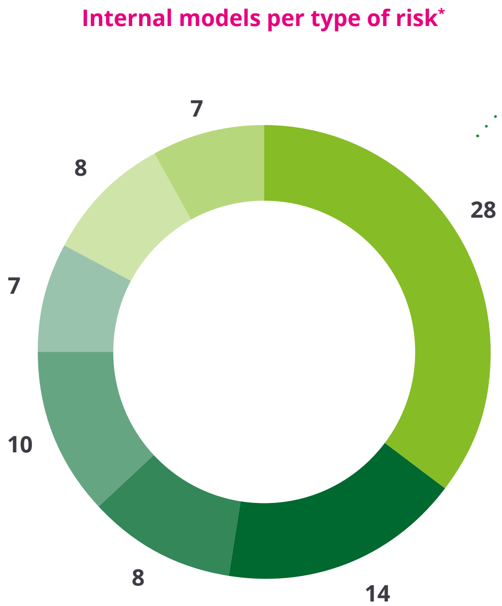
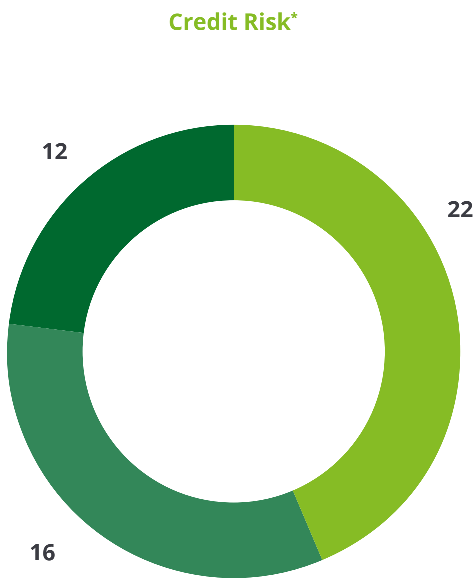


Fig. 4 – Approaches used



Comparable banks sometimes expect quite different impact. An individual analysis therefore is a must.





* multiple answers were possible

- Credit risk – IRBA
- Market risk – IMA
- Operational risk – AMA
- Counterparty credit risk (CCR)
- CVA – IMM
- Securitisations – SFA
- Securitisations – IAA

- Credit risk – IRBA for retail
- Credit risk – Foundation IRBA for non-retail
- Credit risk – Advanced IRBA for non-retail

Survey results

Overall RWA impact

Although the BCBS has always stated that the introduction of the finalised capital rules is not intended to increase capital requirements for institutions, the CRR III impact analyses to date show a different picture, especially for the EU banking sector. For example, the analysis of the European Banking Authority (EBA) on the regular Basel III monitoring process as of 31 December 2021 shows that, as a result of a full implementation of the CRR III requirements, an increase in total additional own funds requirements of EUR 1.2 billion is expected for European banks.[9]

Our survey confirmed a similar expected change in RWA due to the new Basel framework. According to our results, about four out of five institutions expect an increase in RWA, with 23 survey participants estimating an increase of more than 10% and six expecting an increase of more than 20%. In general, our results are in line with previous supervisory findings (cf. fig. 5).

> The results are quite divergent. A few winners, who expect RWA relief from the new regulations, stand in contrast to many losers, who expect significant increases in the required capital.

Interestingly, however, we found that just under 20% of the institutions either expect no RWA impact at all or an increase of no more than 5%. A further approx. 15% even expect a reduction in RWA. Based on the geographical origin of the institutions those that expect lower RWA requirements in the future are disproportionately European institutions headquartered outside the EU or institutions in the Asia-Pacific region. This means institutions outside the EU tend to be among the "winners", since the remaining non-EU institutions, with one exception, also expect only small RWA increases of between 0% and 10% (cf. fig. 6). This is in line with the impact studies of the EBA and BCBS, which tend to predict a stronger RWA increase for Europe. The EU Commission has already made initial efforts to mitigate the effects of the new rules through various deviations from the BCBS framework in the CRR III draft.

> Institutions in the EU are likely to be hit harder than other banks.

The information we gathered is not sufficient to explain in full what exactly makes the impact higher for European banks. One possible answer is the wide-spread use of internal ratings in a region which has seen low default rates for major parts of the portfolio over a long time. Under these circumstances, the impact of the output floor is particularly high. At the same time, there has been no benefit for corporate borrowers from obtaining eligible external ratings. This also means that the newly introduced 75% risk weight for BBB-rated borrowers in the standardised approach for credit risk has little effect, as in several European markets very few corporates are rated by a rating agency as of now. The intention of this reduced risk weight is to mitigate the impact of other changes in the CR-SA. The lack of eligible external ratings affects both banks using the CR-SA as well as – because of the output floor – portfolios which are currently subject to the IRBA.

An analysis of RWA effects based on the size of the institution again shows our survey is consistent with BCBS and EBA analyses: Large institutions with a balance sheet total of more than EUR 30 billion expect the highest RWA increases (>20%). Since the largest institutions rely most heavily on internal risk measurement approaches, the effects of the output floor are strongest for those banks.

Fig. 5 – Expected RWA change after full implementation of Basel III/CRR III

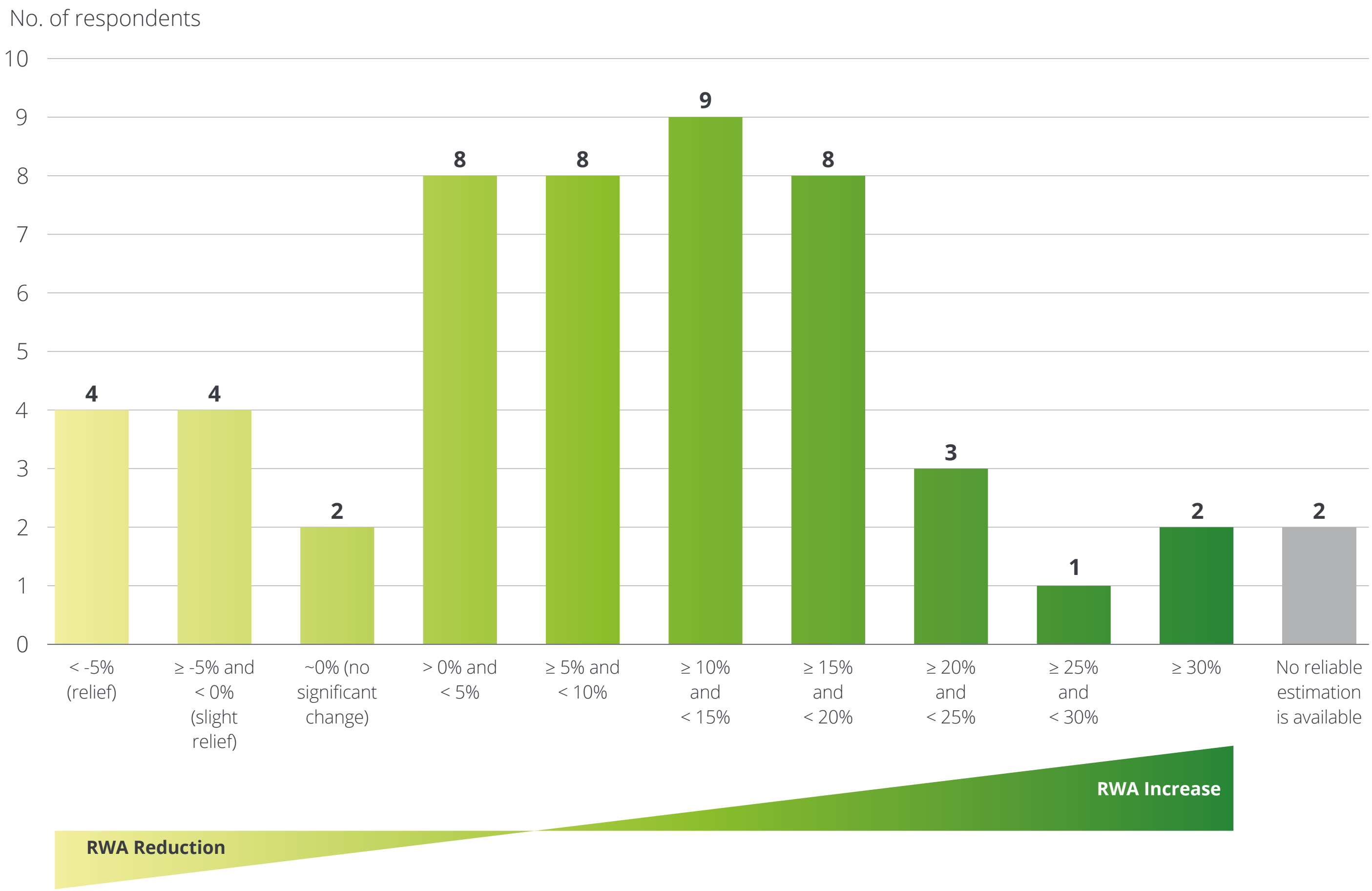


Fig. 6 – Distribution of RWA change by approach used (credit risk)

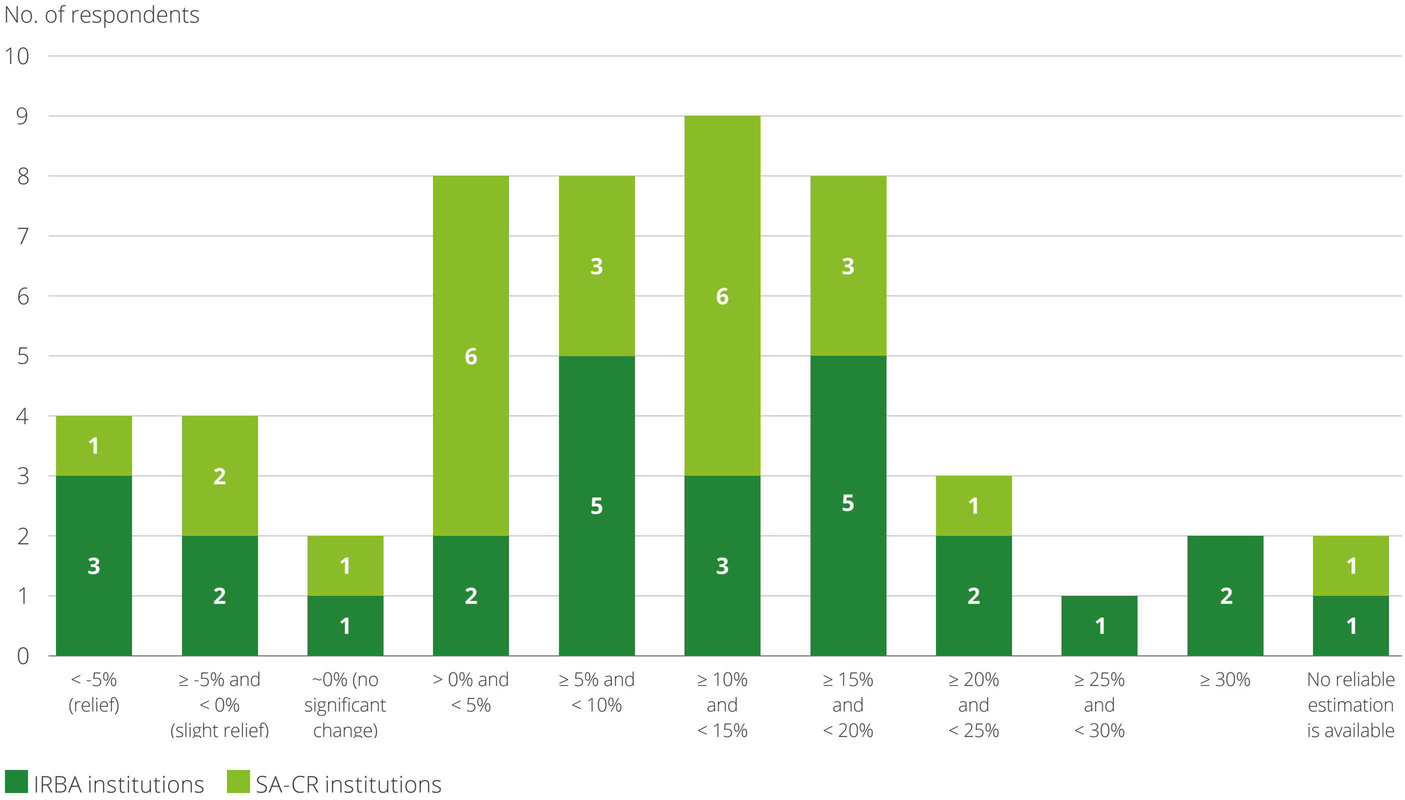
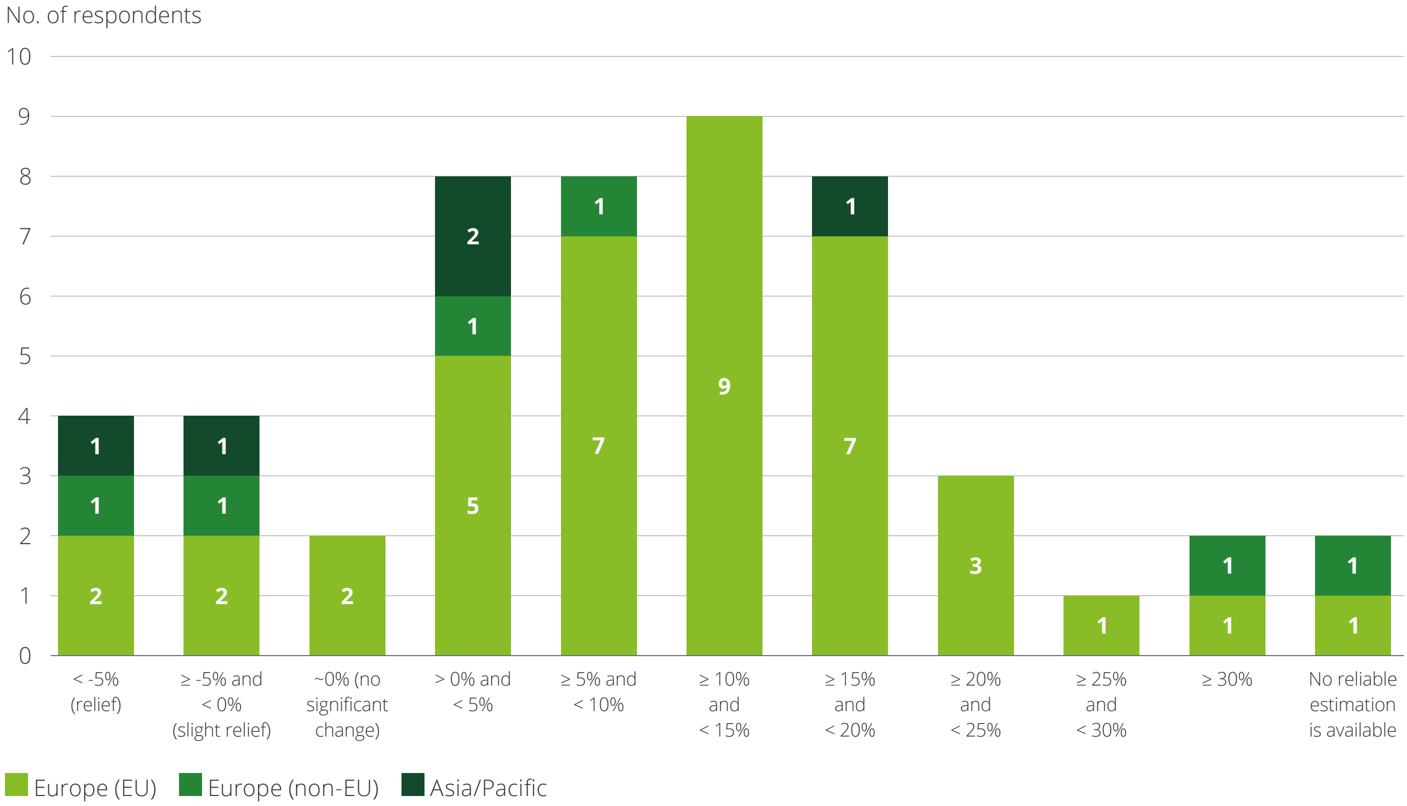


Fig. 7 – Distribution of RWA change by region



RWA drivers

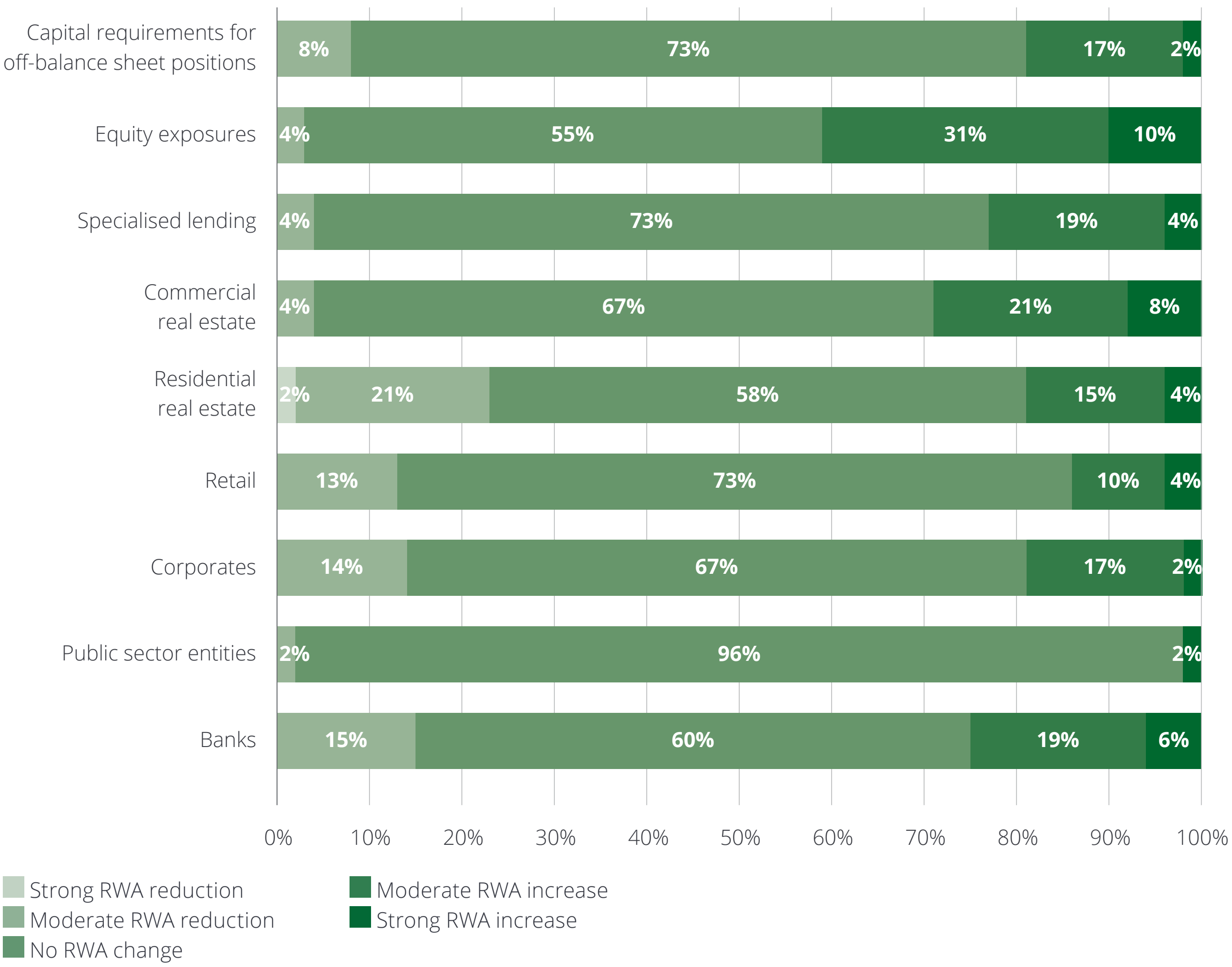
To gain a better understanding of the interdependencies in the expected RWA changes, the most important changes by risk type were surveyed. The institutions were able to assess the intended regulatory changes with regard to their individual RWA effects. Institution could rate the indiviudal impact of the intended regulatory changes on a scale reaching from “significant RWA reduction" to "significant RWA increase”.

With respect to the revised standardised approach for credit risk (SA-CR), more than 40% of institutions consider the future risk weight of equity exposures of 250%[10] as a key RWA driver. A quarter of banks also cite the risk weight for credit institutions, which can no longer be derived from the rating of the jurisdiction, where the credit institution is incorporated. The new risk weight for commercial real estate financing – one of the most comprehensive changes under the new rules – is also expected to increase RWA by almost a third of the institutions surveyed. An RWA-reducing effect is only expected for a few regulatory changes, most notably the future risk weight of residential real estate financing (as indicated by 23% of participants) as well as retail, corporates, and banks (as indicated by approx. 15% of participants).

In summary, our results show that the RWA effect of the changes in the new SA-CR is not uniform. Rather, the effect of the new rules varies depending on, for instance, the portfolio structure, external rating coverage and collateralisation in the real estate business of the respective institutions.

The future risk weight for equity positions leads to higher capital requirements in the SA-CR. Exposures to institutions and corporates as well as real estate financing are also common drivers of higher capital requirements.

Fig. 8 – RWA drivers in the SA-CR

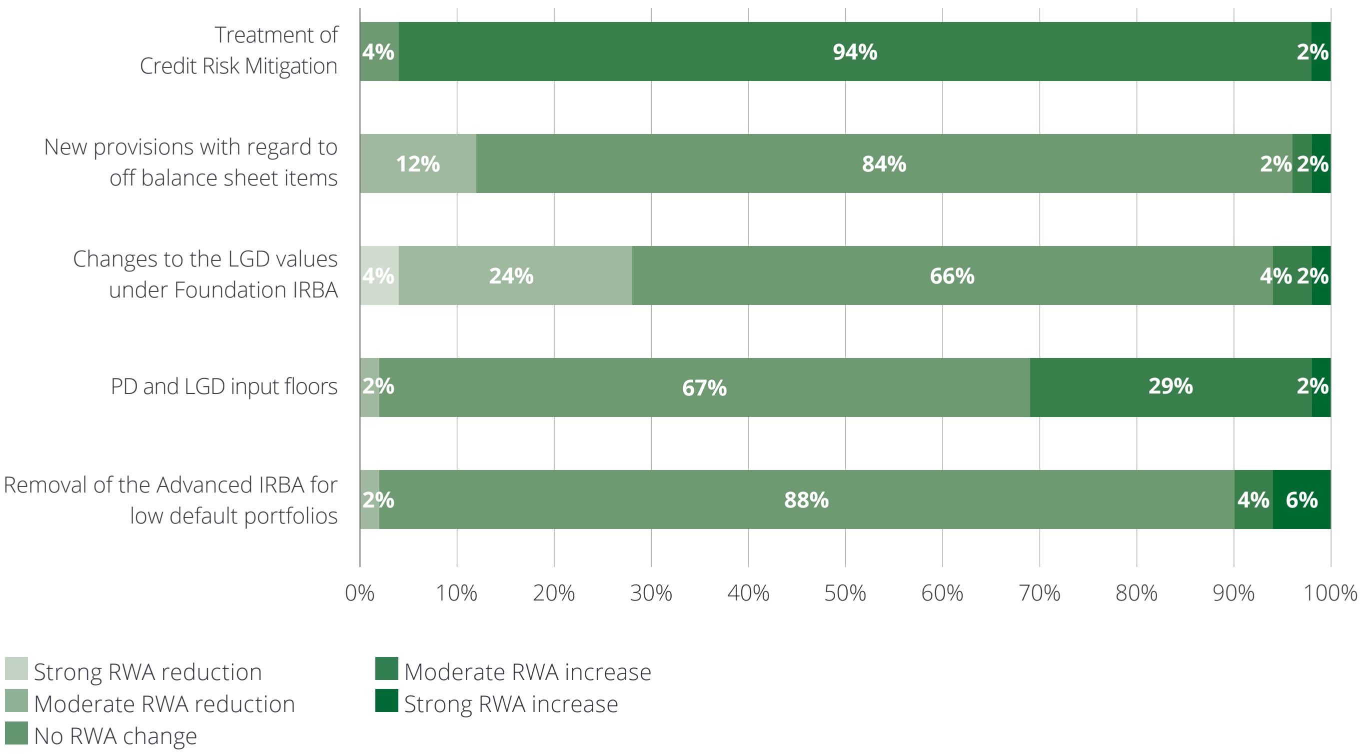


The assessment of RWA changes in the IRB approach, on the other hand, is largely uniform: The majority of institutions assesses the changes as RWA neutral. In case of a deviation from this assessment, the corresponding market expectation is rather consistent. While most institutions have indicated that the changes regarding off-balance sheet items as well as the changes to regulatory LGD values in the foundation IRBA reduce RWA, they have also indicated that the introduction of input floors for internal parameter estimates (PD, LGD, CCF) as well as the discontinuation of the advanced approach (advanced IRBA, A-IRBA) for certain portfolios (large corporates, institutions) are drivers of increased RWA.

Overall, however, the RWA effects of IRBA modifications appear to be comparatively moderate. This is understandable as Basel III/CRR III, through the introduction of the output floor, significantly reduces the comparative benefit of internal models and thus their RWA reducing effect (cf. section 3.4).

RWA changes in the IRBA are primarily driven by the changed regulatory LGD in the foundation IRBA (relief) and the input floors (higher RWA). The other changes tend to be less relevant.

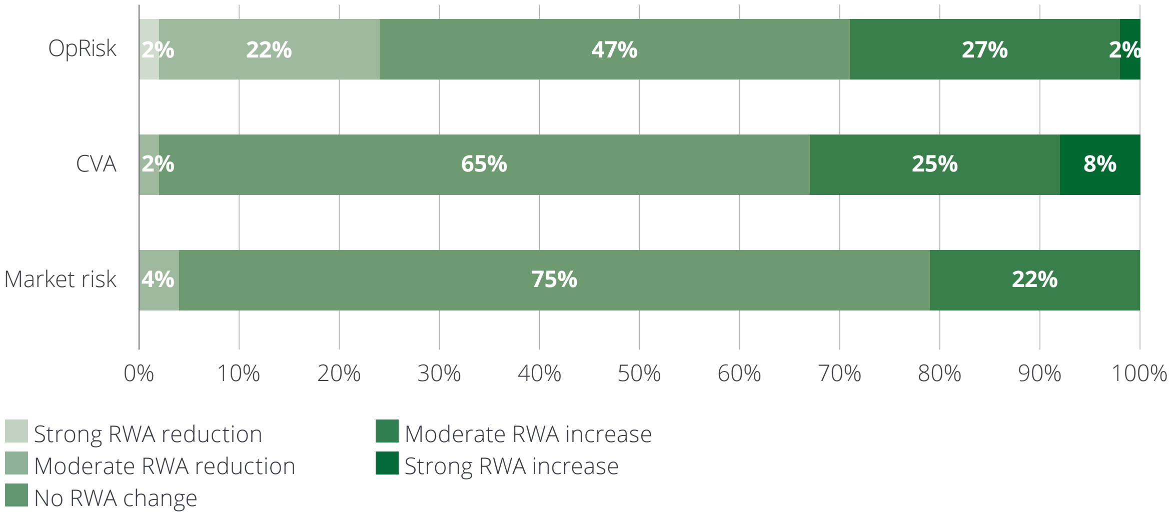
Fig. 9 – RWA drivers in the IRBA



The changes in capital requirements for operational risk are noteworthy. Under the finalised Basel III rules, this capital requirement must be determined by all institutions according to a new, uniform standardised approach. Almost half of the institutions do not expect any major impact with regard to the required own funds. The remaining responses, however, are almost evenly divided between an increase and a reduction in capital requirements.

The capital requirements for market risk and credit valuation adjustments (CVA) also present a comparatively uniform picture (cf. fig. 10). For the most part (CVA: 65%, market risk: 75%), no significant changes are expected. This is not surprising, as these risk types are less significant for many non-trading book institutions. However, if any changes are expected, they almost always lead to an increase in capital requirements. Less than 5% of the institutions expect RWA relief.

Fig. 10 – RWA trends for other risk types



Drivers of the output floor effect
The BCBS and EBA impact studies[11] have already shown that the introduction of the output floor is one of the main drivers for the expected increase in the total own funds requirements. Our survey thus focused on ascertaining which risks or transactions have a particularly high contribution to the increase in RWA under the output floor – i.e., where the difference between the risk weights in standardised approaches and internal models is particularly large.

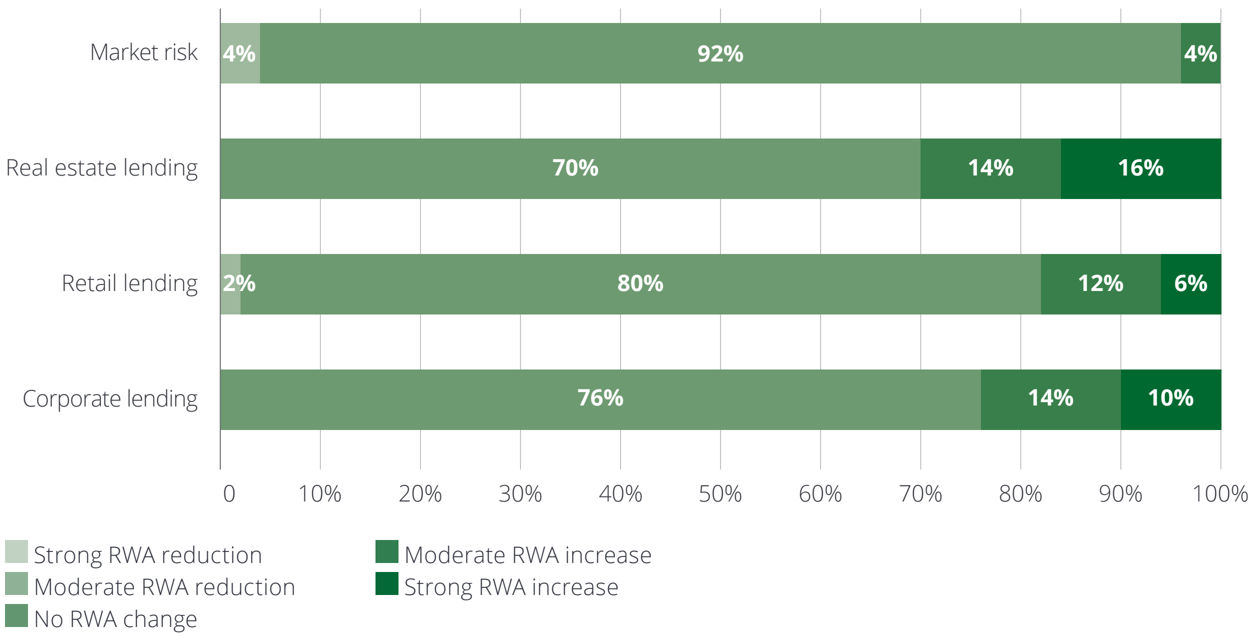
Figure 11 shows that market risks are not significantly affected by the output floor, while in the area of credit financing the three segments considered (real estate, retail and corporate) all contribute significantly to an increase in own funds requirements. Real estate financing is most affected, where almost a third of institutions surveyed expects a strong (16%) or at least moderate (14%) increase in RWA. This shows that despite the intended higher risk sensitivity of the SA-CR, significant savings potential under the IRBA is still expected, at least in real estate financing.

Real estate and corporate financing are particularly affected by the output floor, but RWA increases are also expected in the retail business.

The outlook for corporate finance is somewhat less pessimistic. About a quarter of institutions expect a negative impact on capital requirements. The newly introduced reduced risk weight of 75% for BBB-rated exposures should help to reduce the differences between SA-CR and IRBA.[12] In addition, the elimination of the A-IRBA for certain exposures may increase the risk weight in the IRBA, so differences between SA-CR and IRBA will also reduce.

In the retail business, the outlook is less negative: Only 6% of respondents expect a strong increase in RWAs and 12% a moderate increase. This contrasts with 2% who expect RWA reductions. This answer is not immediately intuitive because the output floor can typically only lead to an increase in capital requirements. However, portfolios with average IRBA risk weights higher than 72.5% of the corresponding risk weight in the SA-CR cause the comparative value for the output floor to fall. In this respect, they reduce the RWA burden of the floor at the overall bank level.

Fig. 11 – Output floor drivers



Strategic impact

The various changes in the RWA calculation mean that the attractivity of certain products and business areas may have to be reassessed. In this context, less than 40% of the institutions surveyed assume that the new rules will have no strategic impact. In contrast, approximately 30% expect that adjustments in the design of products and/or a realignment of portfolios will be necessary. 13% of institutions are considering a fundamental realignment of the business model, and just under 8% an adjustment of the customer structure.

Most notably, large institutions (with a balance sheet total of EUR 30 billion or more) are specifically thinking about adjusting portfolios or business models. Since larger institutions are usually more affected by changes due to the output floor, this result is not surprising. The detailed analysis shows that users of internal models/rating procedures want to rethink their portfolio structure and, if necessary, the business model. Geographical location does not seem to affect the assessment of strategic implications.

Several smaller institutions in the sample (up to EUR 30 billion total assets) have also recognised the need to realign portfolios or their business model, meaning smaller institutions cannot ignore the issue. It is also noticeable that a large number of smaller institutions see a need to review the design of their products.

Moving from SA-CR to IRBA could be a solution to RWA challenges for some institutions, provided that the average portfolio quality and mix indicates a reduction in risk weights.[13]

Fig. 12 – Expected strategic impacts of Basel III/CRR III

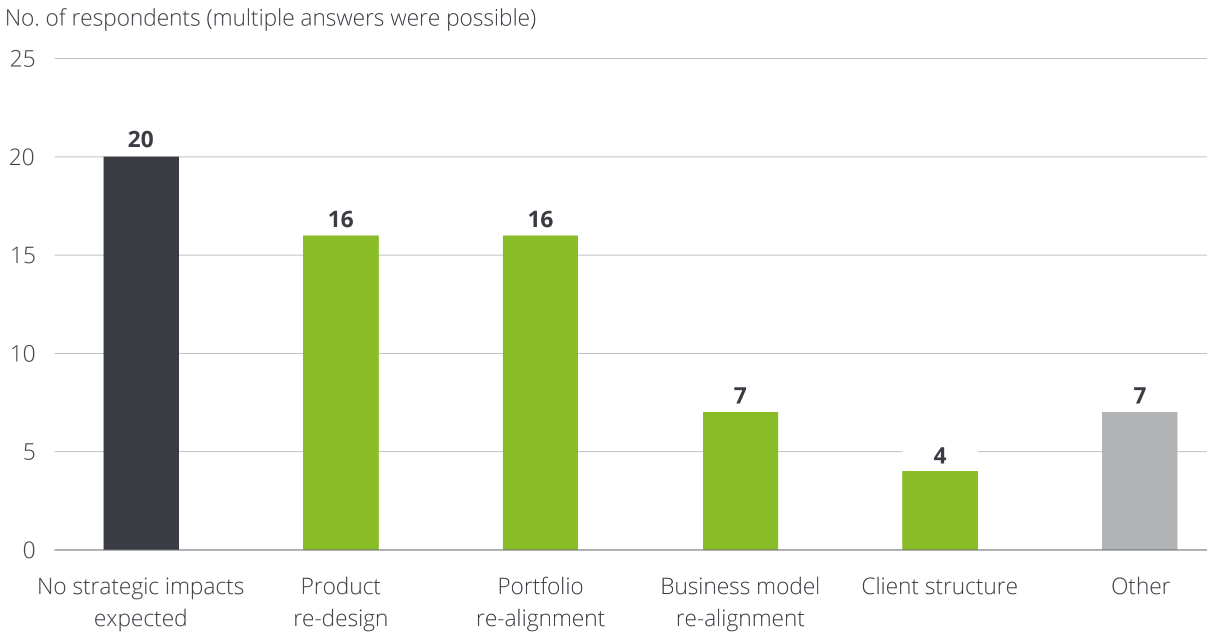


Fig. 13 – Expected strategic impacts by total assets

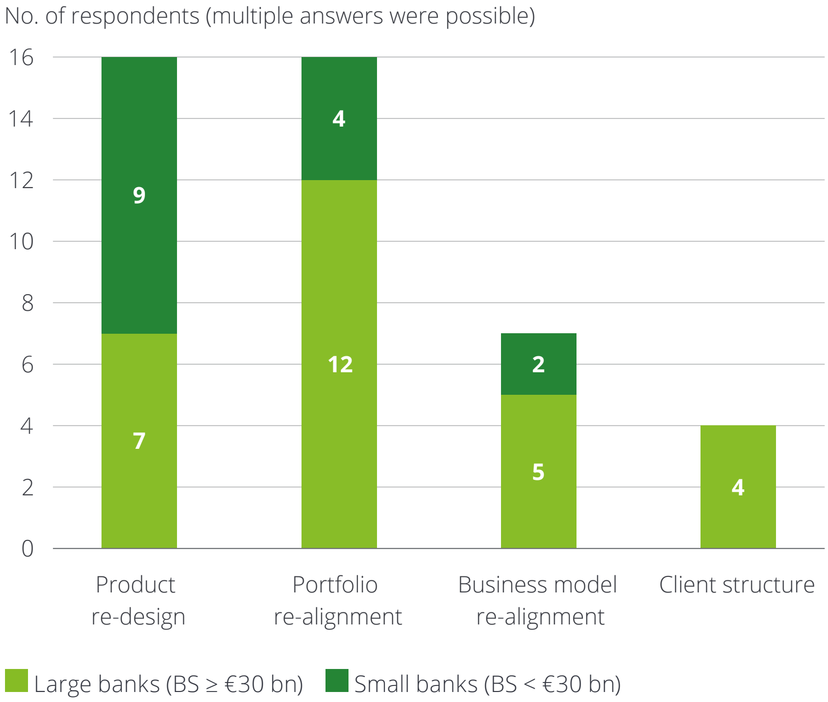


Fig. 14 – Expected strategic impacts by approach

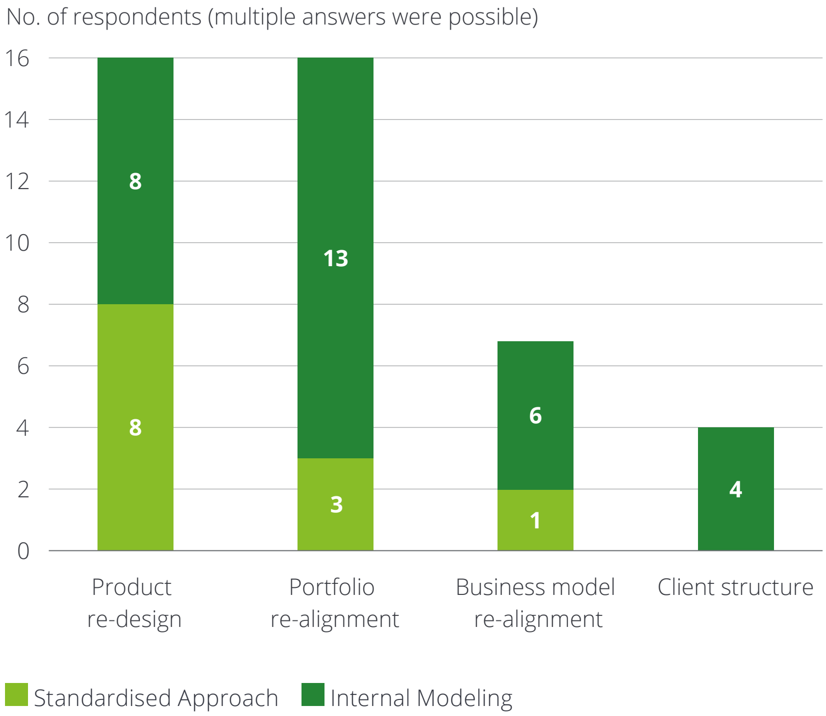
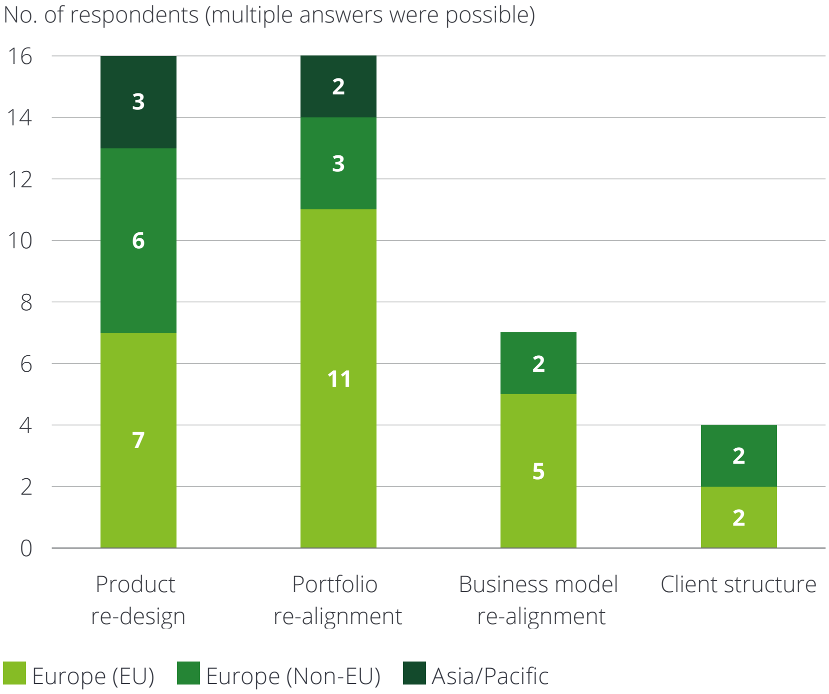


Fig. 15 – Expected strategic impacts by region



About two-thirds of the institutions surveyed indicate that they intend to conduct an RWA optimisation exercise. Almost one in eight institutions sees a fundamental need for action regarding their business model (cf. fig. 16).

More than 60% of respondents see a need for action in the context of capital planning or in the pricing of products. This reflects the increasing capital requirements on average, as well as the need to generate an adequate return on capital under the new rules.

More than 60% of the respondents see a need for action in the context of capital planning and pricing – but only very few have already made significant progress. Roughly a quarter indicated that internal capital allocation will have to be adjusted. Consequently, many banks expect to re-design some products or re-align the portfolio.

The latter point is of particular importance, because pricing that is not in line with the market is – at least in theory – disadvantageous for the institution: If the capital premium is set too low, net interest income decreases. As a result, it becomes more difficult to strengthen the capital base. Conversely, excessive capital premiums can lead to an institution pricing itself "out of the market" and the customer switching to a competitor. The "right" integration of capital requirements into product calculations is therefore important for long-term success. Accordingly, more than 25% of institutions surveyed explicitly stated that they wanted to review their internal capital allocation.

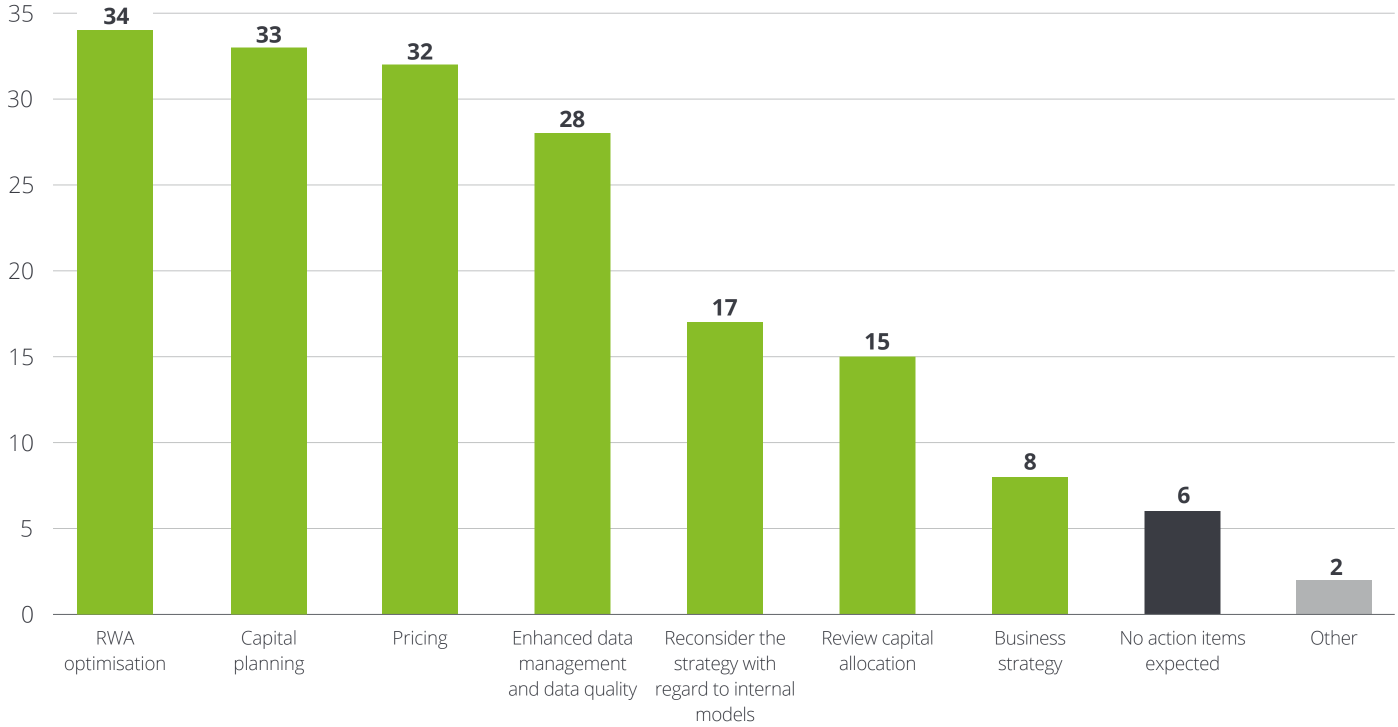
Directly related to this are the approaches used to determine regulatory capital requirements. Some 40% of institutions intend to review the usage of internal models. These considerations go both ways depending on the insitution's current state – some of those currently using internal approaches are considering switching to standardised, and conversely others using standardised are considering seeking approval for the use of internal ratings or risk models. A detailed analysis of this can be found in the sections on the benefits of the IRBA (p. 30 ff.).

Beyond the strategic implications, a compelling need for action is also seen in relation to data storage and management. More than half of institutions stated that they need to improve data management and/or data quality. This point has a clear connection to RWA optimisation. Often, data that is required for more favourable recognition of transactions is not available or is outdated. This information needs to be recorded systematically; the required data fields and the associated processes are yet to be created in some cases.

The high relevance of the revised capital requirements can also be shown by means of a cross-check: Only one in eight of the institutions surveyed could not identify any major need for action.

Fig. 16 – Identified action items

No. of respondents (multiple answers were possible)

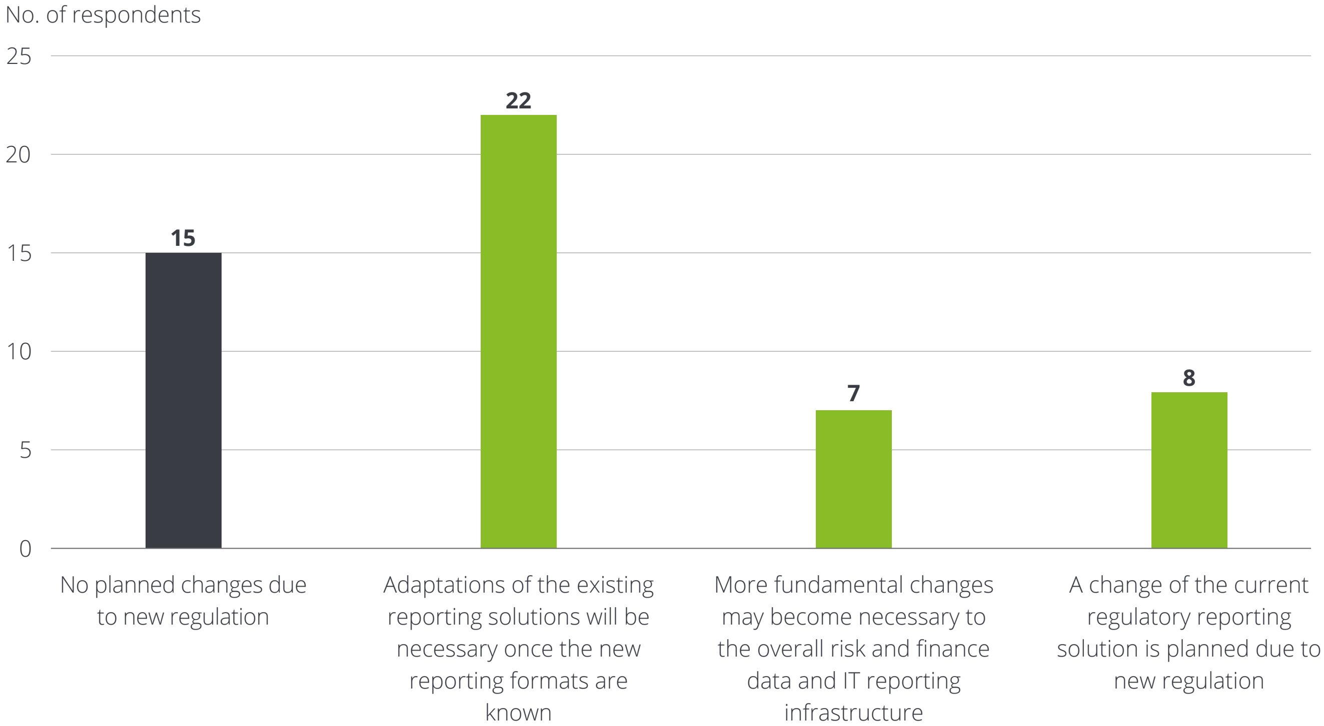


Status of implementation activities

Since the vast majority of institutions sees a need for action, a question arises as to how far participants have progressed with their implementation activities. With regard to the adjustments to IT infrastructure, the picture is varied. Approximately 15% of the institutions surveyed stated that they were already planning a Basel III-related review of their IT systems or are at least considering the possibility of fundamental change. Roughly 40% of institutions do not yet see any need for structural action but consider it to be possible. Approx. 30% of the institutions surveyed believe that no structural adjustments are currently required due to the new capital requirements.

Less than one third of the respondents do not see a need for structural changes to the regulatory reporting environment. In contrast, approximately 15% fear that significant changes to the risk and finance data infrastructure or even a new data warehouse will be required to implement the new regulatory framework.

Fig. 17 – Impact on IT infrastructure



Among the institutions that do not expect structural changes, no significant trends could be identified with regard to the size of the institution, or whether the institution uses standardised approaches or internal models/ratings. Accordingly, structural changes in IT will largely depend on the current state of the IT stack within the institution.

Where adjustments are expected, these are distributed across various sub-areas. As expected, the greatest need for action is seen in RWA calculation engines. More than half of the respondents see a need for action here. In light of the breadth of changes in RWA calculations, it is surprising that this figure is not higher. One possible reason for this could be the use of third-party calculation software in the reporting system, that the changes are considered to be less challenging technically.

For reporting systems, the need for action is considered somewhat lower. Here, just under 40% of the institutions surveyed see the need for significant improvements or even new systems. Of these, about half stated that both the reporting and RWA calculation engines need to be adapted – there is a need for action at both levels.

Adaptation is also deemed necessary for risk reporting systems (23%) and databases or risk and financial data infrastructure (17%). As the latter tend to be more inward-looking, it is not surprising that this response was given less frequently than for reporting.

Fig. 18 – Changes of the IT infrastructure necessitated by Basel III/CRR III

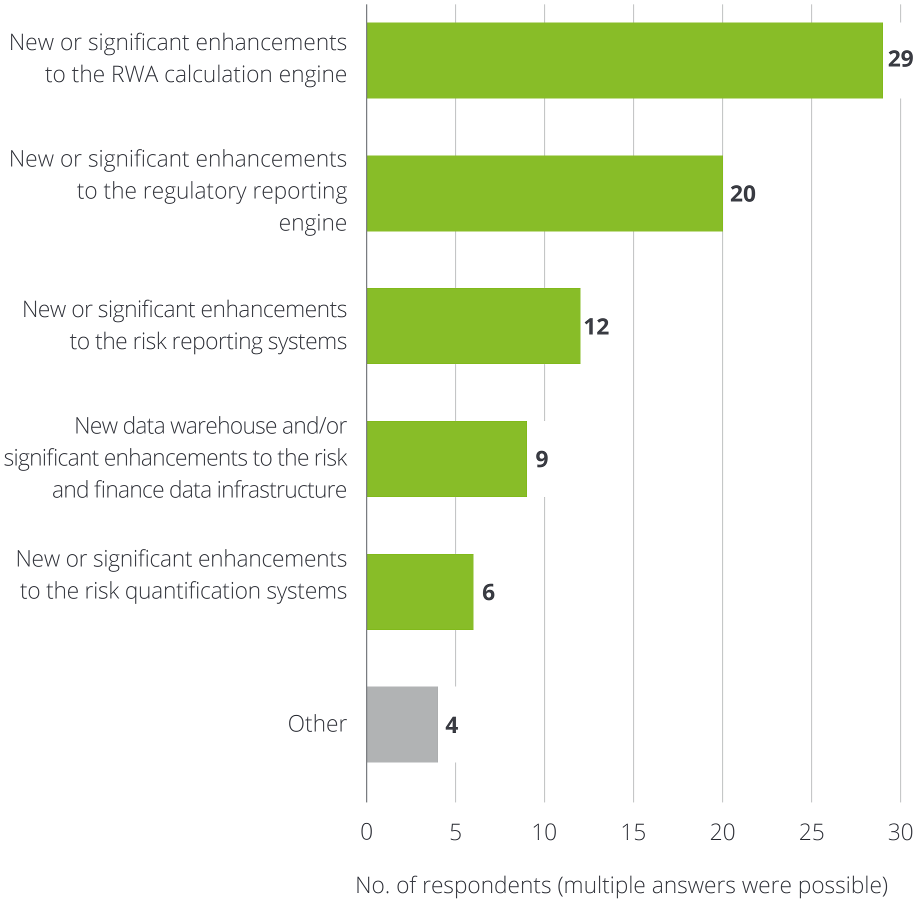
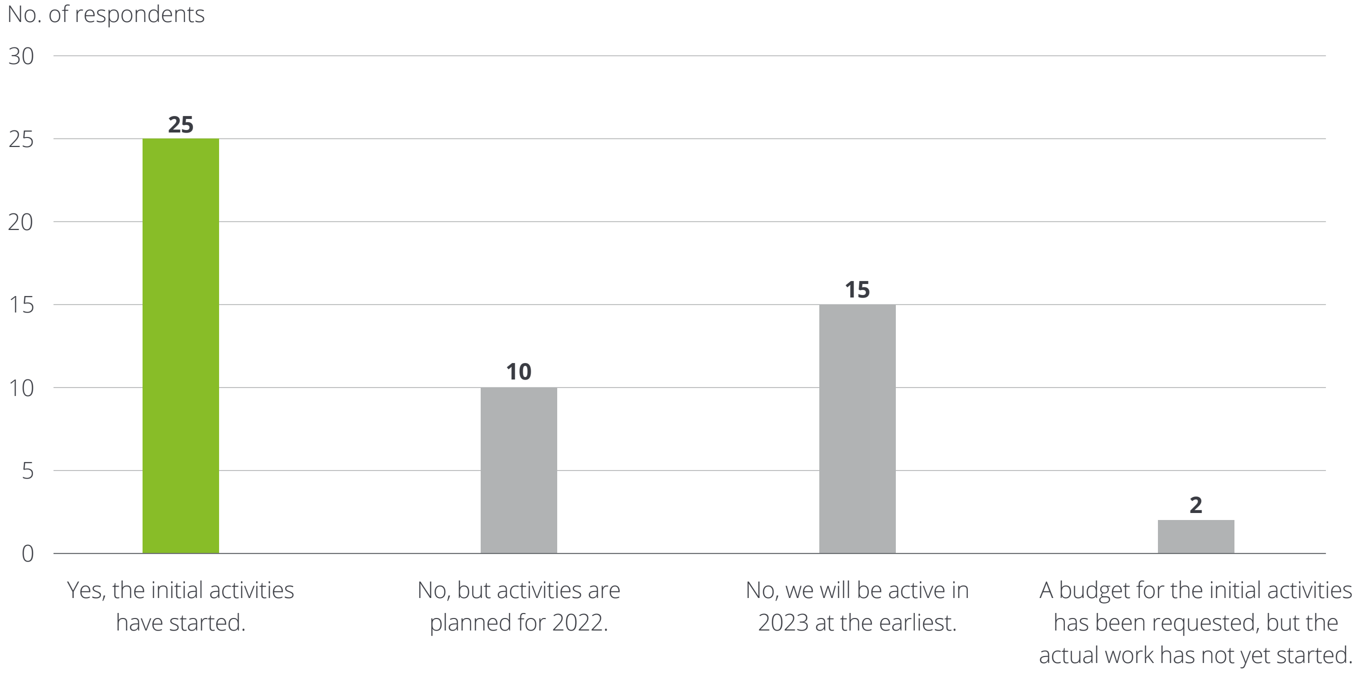


Fig. 19 – Ongoing and planned implementation activities



About half of the institutions had already engaged in first activities at the time of the survey (mid-2022) or had at least requested a specific budget. Another almost 20% had planned to start a project in 2022.

The remaining almost 30% of the institutions provided different reasons for commencing their implementation in 2023 at the earliest – the most common reasons were uncertainties regarding the go-live and possible changes to the ruleset before its final adoption. It must be clear to these institutions that, while a later implementation will bring greater clarity with regard to the specific requirements, the implementation period will inevitably be shorter. In view of the aforementioned needs for strategic adjustment, this strategy is not without risk as, in addition to the IT-related changes, adjustments may also be necessary to the business model and the pricing of products, which usually require a longer lead time.

A later start of implementation activities will benefit from greater regulatory clarity at the cost of a shorter implementation project timeline.

For smaller institutions, a lack of specifications from service providers (e.g., jointly operated data centres) was sometimes cited as a reason for a later start to the project. These institutions should also ensure that they are not flying blind with regard to future own funds requirements, and that the remaining time period is sufficient to be able to implement any necessary adjustments in own funds and/or in the portfolio by the time CRR III enters into force.

A breakdown by region shows slight differences: In particular, in the non-European regions (i.e., Asia-Pacific), almost all institutions have already started with the implementation activities, whereas in the EU a higher proportion will wait to start until 2023. However, it should be noted that some of the participating institutions from the EU are significantly smaller than the non-European institutions. Large institutions tend to be further along than smaller ones. At the same time, European institutions can assume that CRR III will come into force in 2025 at the earliest, while outside Europe, local regulatory go-live dates are expected to be sooner at least in some regions.

Among the implementation activities already carried out, data availability analysis is most prevalent, followed by a fundamental impact analysis of the new regulations on the IT environment. In contrast, only a few institutions have made concrete adjustments in their portfolio or focused on RWA optimisation. The same applies to capital allocation and pricing. Since the old rules will still apply for a few years until the new rules come into force, it is not surprising that banks seem to proceed with caution.

Nevertheless, it is advisable to know the business areas/products that will be worse off as a result of Basel III/CRR III. This applies to the regulatory treatment of new business, but also to the disposal of (partial) portfolios. If the maturity of the new business falls within the period of Basel III/CRR III application, the future treatment of a deal should already be adequately reflected in the pricing. If the disposal of customers or portfolios based on the new regulatory rules is being considered, the "candidates" should also be identified at an early stage in order to take advantage of favourable market situations.

Fig. 20 – Reasons for later start of implementation

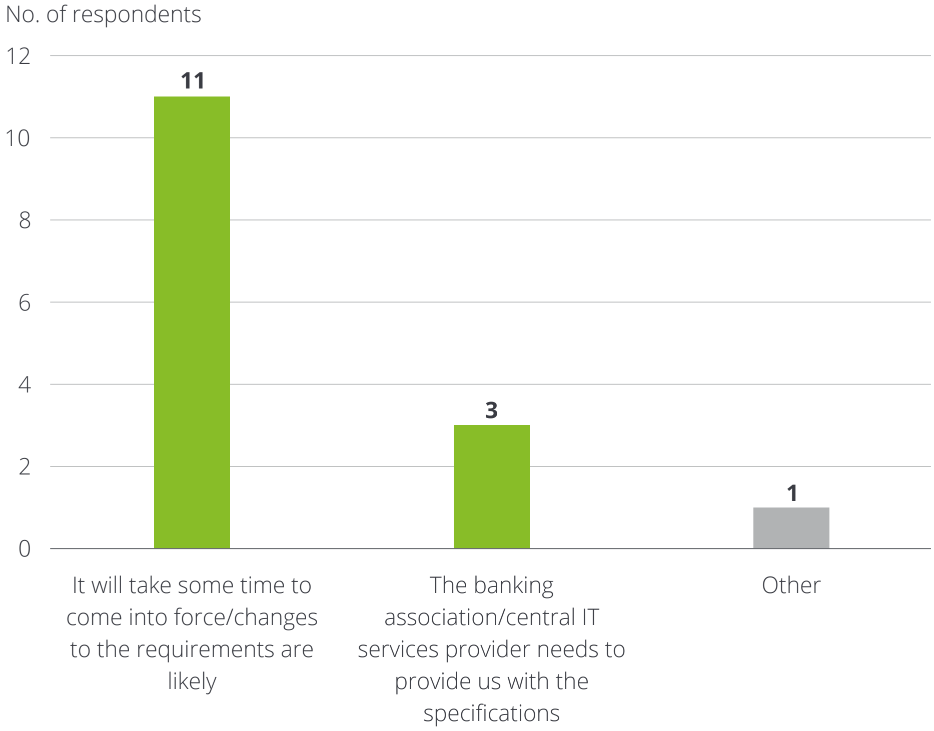
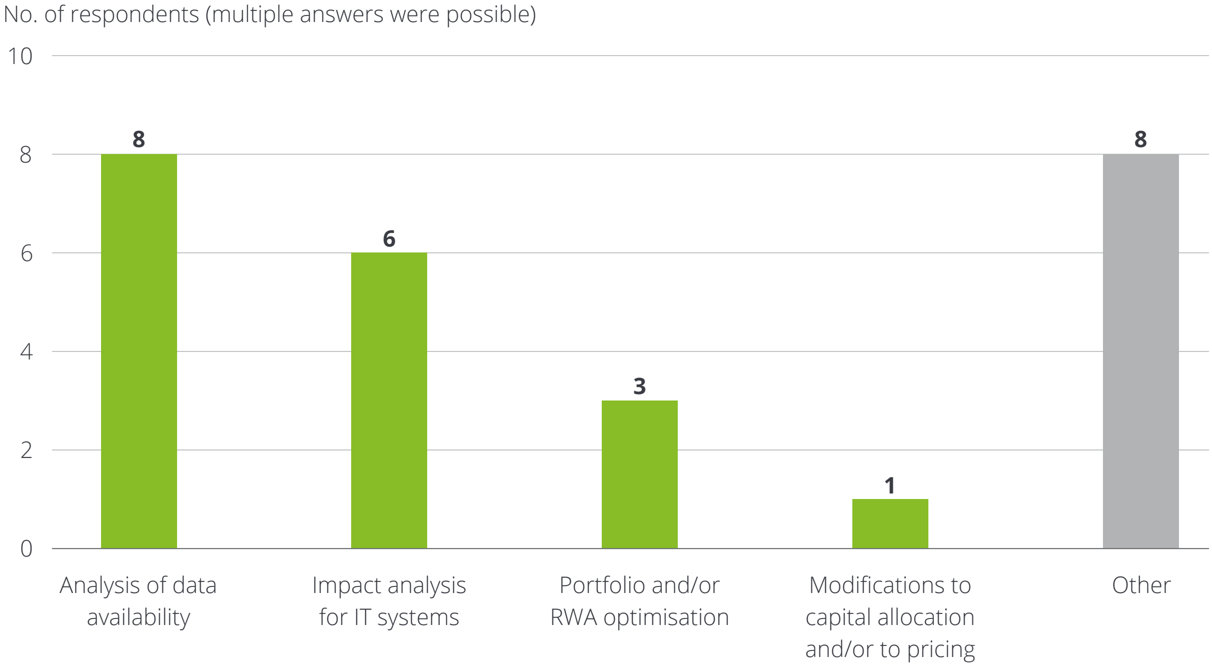


Fig. 21 –Completed implementation activities



The evaluation of implementation activities is "distorted" by the fact that large European institutions are obliged to participate in the EBA's annual impact study and must therefore calculate and report their capital requirements under the new rules at least yearly. Nevertheless, non-European institutions have also carried out regular impact calculations. Because these calculations require extensive preparation and data work, these institutions should in principle be in a better starting position. Apparently, however, the majority of the calculations has not yet been carried out using an optimised data basis, as not even one in five of the institutions that regularly carry out an RWA impact calculation stated that data availability analysis had already been completed.

Of the institutions who perform regular RWA impact calculations, only one in eight had completed an IT impact analysis, not a single institution conducting regular calculations has completed its impact analysis on capital allocation and pricing, and almost one in two institutions (43%) had not yet carried out any analyses apart from the RWA calculations. This does not differ significantly from the participants who do not regularly calculate the RWA, as two thirds of these institutions have not yet carried out any detailed analyses.

These results are surprising, as the institutions with regular calculations are predominantly large ones that tend to have more resources to carry out dedicated analyses. At the same time, however, these institutions are also more complex, so that fully comprehensive data and IT analyses are comparatively more time-consuming. Discussions with market participants outside the survey have shown that larger institutions plan to significantly intensify implementation activities for the first half of 2023.

Even larger institutions were not significantly further along in implementing the new regulations than smaller ones at the time of the survey.

The implementation of the new standardised approach for credit risk poses various challenges. The most significant task lies in the implementation of the future capital requirement for real estate exposures: A quarter of the institutions foresees major challenges here. This is not surprising, as the methodology differs fundamentally from the current standardised approach. The other changes – considered in isolation – will generally not pose a major challenge. However, the sum of all necessary adjustments still is a task to be taken seriously: Less than one third of the institutions expects full implementation to be simple. About a quarter of the institutions expects significant effort.

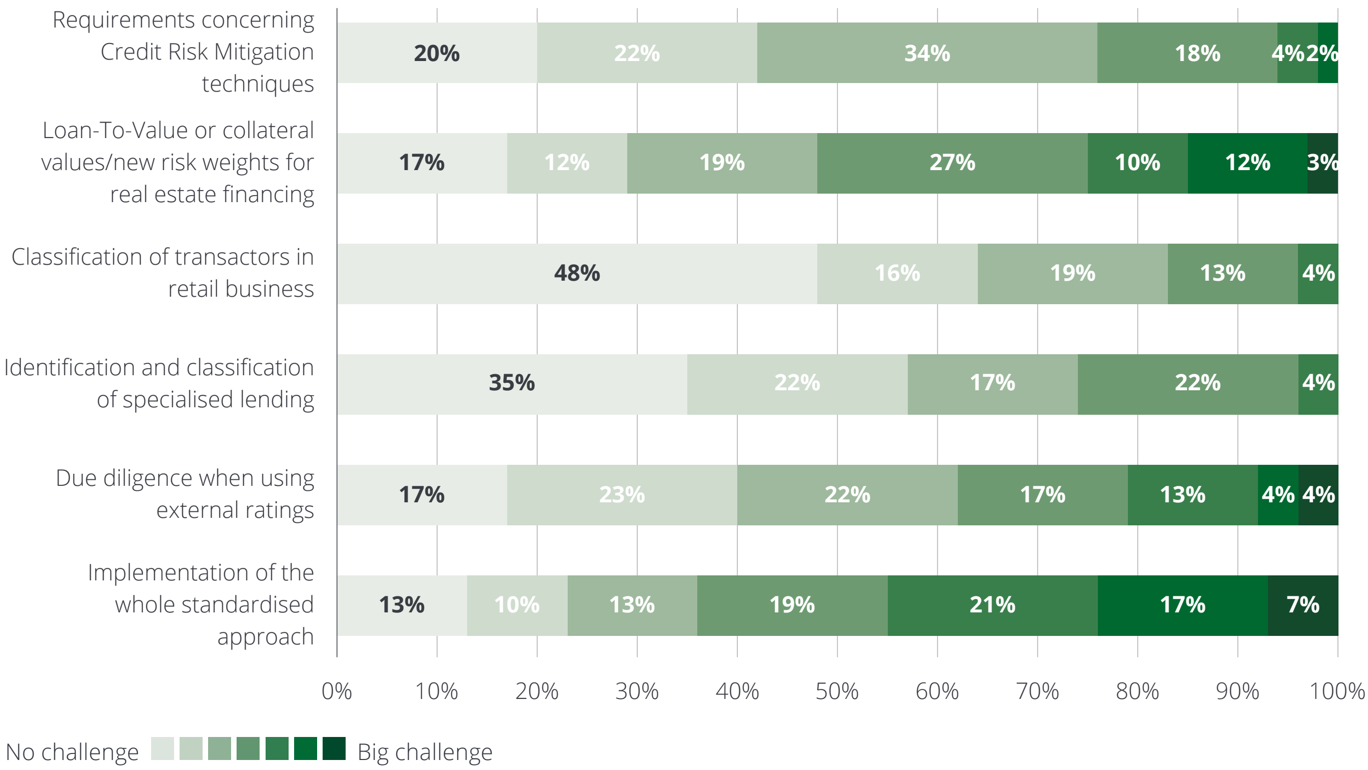
Institutions that expect greater challenges mostly see them in the area of IT, especially with regard to completing the upcoming reports. Some of these institutions expect that their reporting software might have to be replaced. Further need for adaptation is foreseen in risk and finance IT systems. The biggest challenge in the future SA-CR is the comprehensive implementation of all rules and regulations.

Benefits of the IRBA from the perspective of SA-CR institutions

Based on the far-reaching regulatory changes in credit risk, as well as the expected RWA increases described above, SA-CR institutions may want to consider reviewing their previous strategic decision against the use of the IRB approach.

From the survey results/discussions with clients, it appears that the decision against the IRB approach is driven in particular by the change to the conditions for IRBA approval. To illustrate, whereas a German institution must currently roll out the IRB approach to all relevant credit portfolios within five years and calculate at least 92%

Fig. 22 – Implementation challenges with the new SA-CR



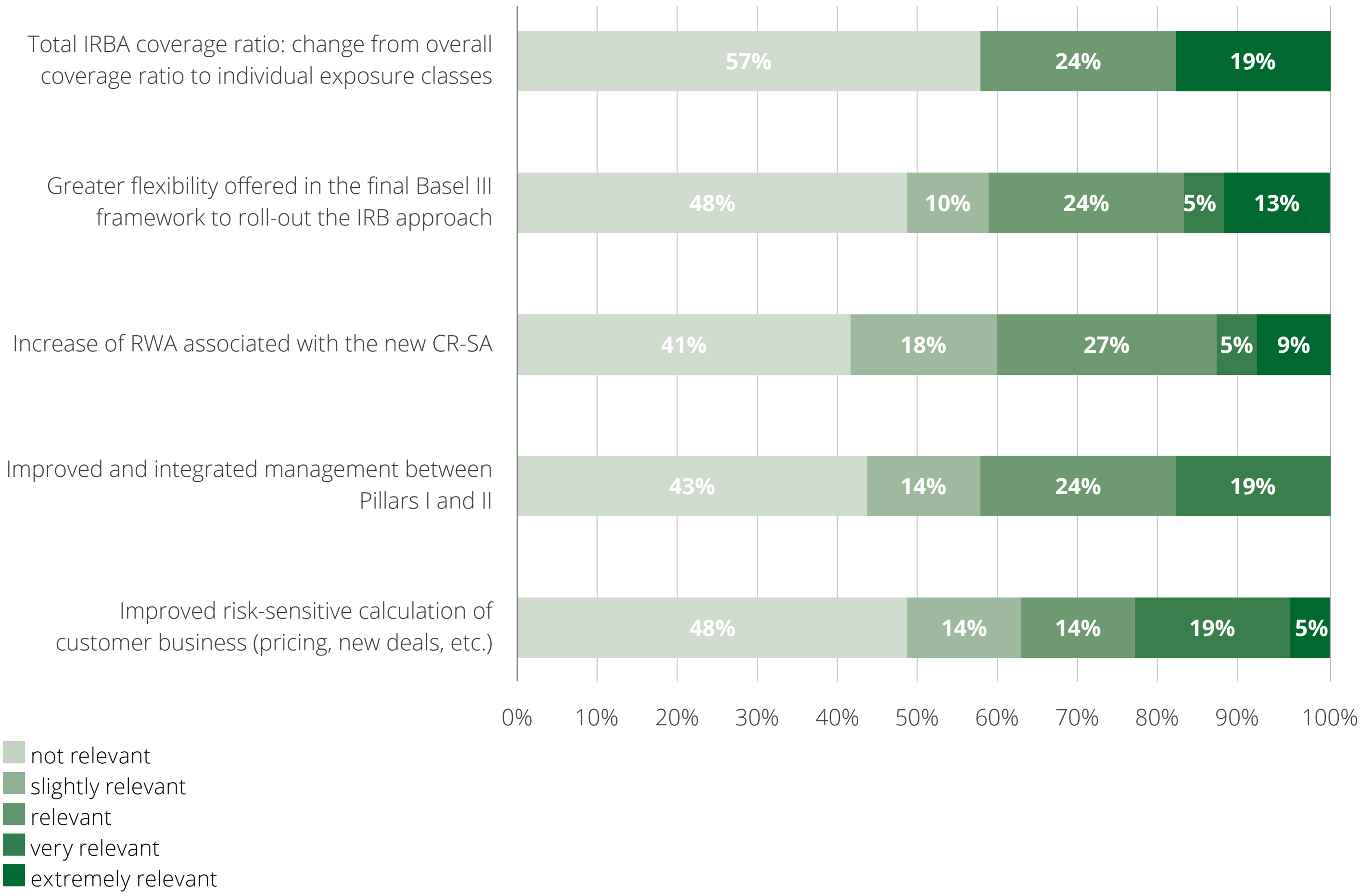
of its credit risk RWA and its credit risk exposures using internal models, in future this will only be required at the level of the exposure class approved for the IRB approach.[14] This is caused by a change introduced by CRR III, which allows bank to seek IRBA approval for selected portfolios only.

This elimination of the so-called IRBA coverage ratio can therefore be understood as a paradigm shift in the IRB approach and will lead to greater degrees of freedom in the future with regard to the IRBA scope as well as increased flexibility in terms of timing, since an overall IRBA implementation plan no longer has to be adhered to for all portfolios.

When asked about the motives for a future IRBA approval under the Basel III/CRR III rules (cf. fig. 23), SA-CR institutions consider the aforementioned elimination of the overall coverage ratio to be extremely relevant, followed by the increased flexibility and the expected increase in RWA under the new Basel III/CRR III requirements in the SA-CR. The possibility of integrated management between Pillar I and II as a result of IRBA approval as well as a corresponding risk-sensitive pricing by exposure, are rated by two out of five institutions as relevant for decision making in terms of IRBA application.

The elimination of the previously required overall coverage ratio makes the IRBA more attractive for SA-CR institutions.

Fig. 23 – Motives for IRBA application under Basel III/CRR III from SA-CR institutions' perspective

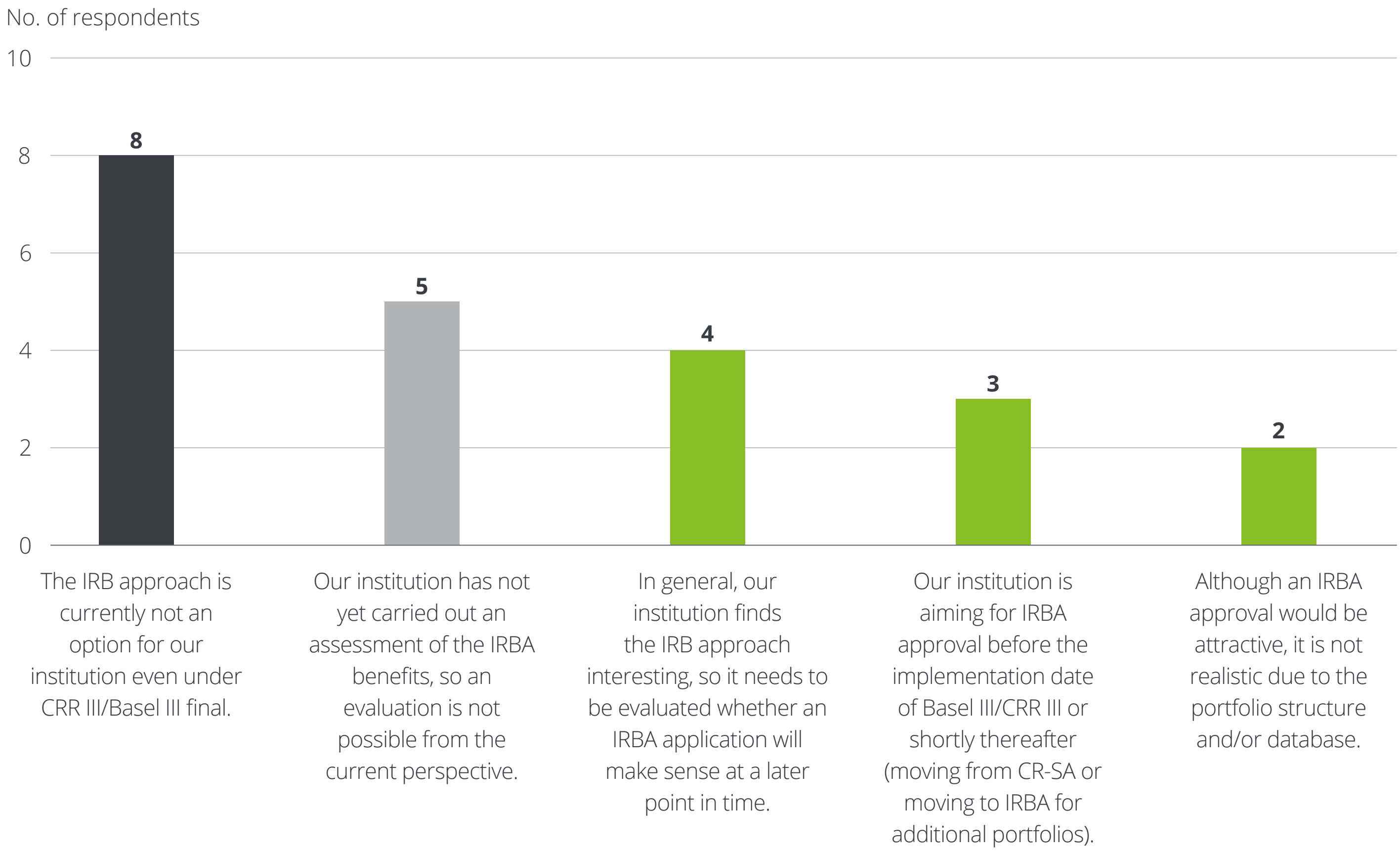


Overall, SA-CR institutions divide into two groups on the basis of the survey results, which is reflected further in the answers to the specific question related to the attractiveness of a future IRBA application (cf. fig. 24).

While eight institutions rate an IRBA application as unattractive even under Basel III/CRR III, almost as many (9) SA-CR institutions rate a possible IRBA application as generally attractive. Three of the latter state that they are already aiming for IRBA approval under the new regulation with the introduction of CRR III or shortly thereafter. In addition to the clear positioning for or against the IRB approach by the majority of the institutions, five institutions have not yet performed an institution-specific assessment regarding the IRBA advantages.

While the IRBA remains unattractive for several banks, just as many are considering applying to move from CR-SA to IRBA for some portfolios.

Fig. 24 – Benefits of the IRBA



The question as to which portfolios would be the focus during a future IRBA application also reveals a varied picture: In addition to classic retail portfolios with small individual exposures and a large number of customers, other institutions indicate portfolios with a small number of clients and generally low defaults (non-SME) corporates, specialised lending or public sector entities) as possible IRBA candidates. This is not surprising considering the different business models of the institutions surveyed and illustrates that it is not only institutions with a retail focus, but also those with specialised portfolio structures who consider the IRB approach to be an attractive option.

The key challenges of an IRBA application, which are often the subject of IRBA benefit analyses, are interestingly not classified by the majority of institutions as a significant obstacle. In contrast, the remaining responses indicate that one third of the institutions anticipate challenges, some of them considerable, for IRB approval. These range from methodological uncertainties and data availability to cost-specific questions regarding the establishment of IRB eligibility and the costs of regular IRB operation.

Fig. 25 – Possible exposure classes for the IRBA

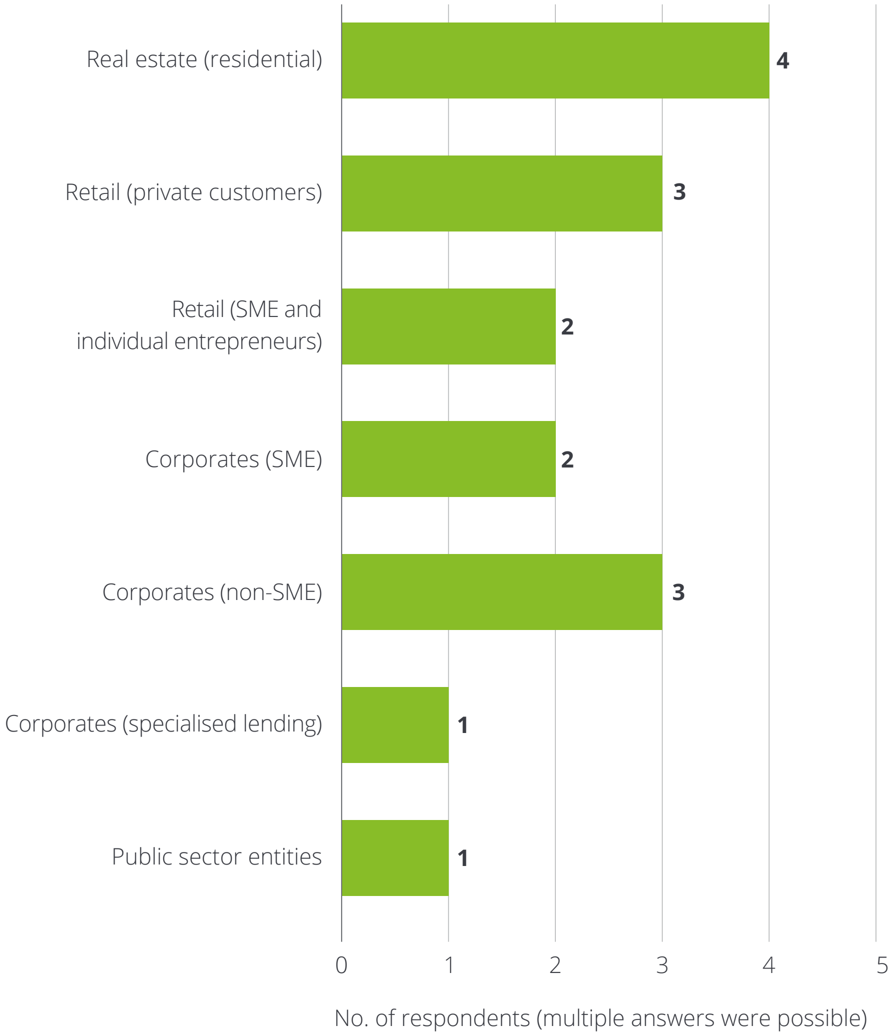
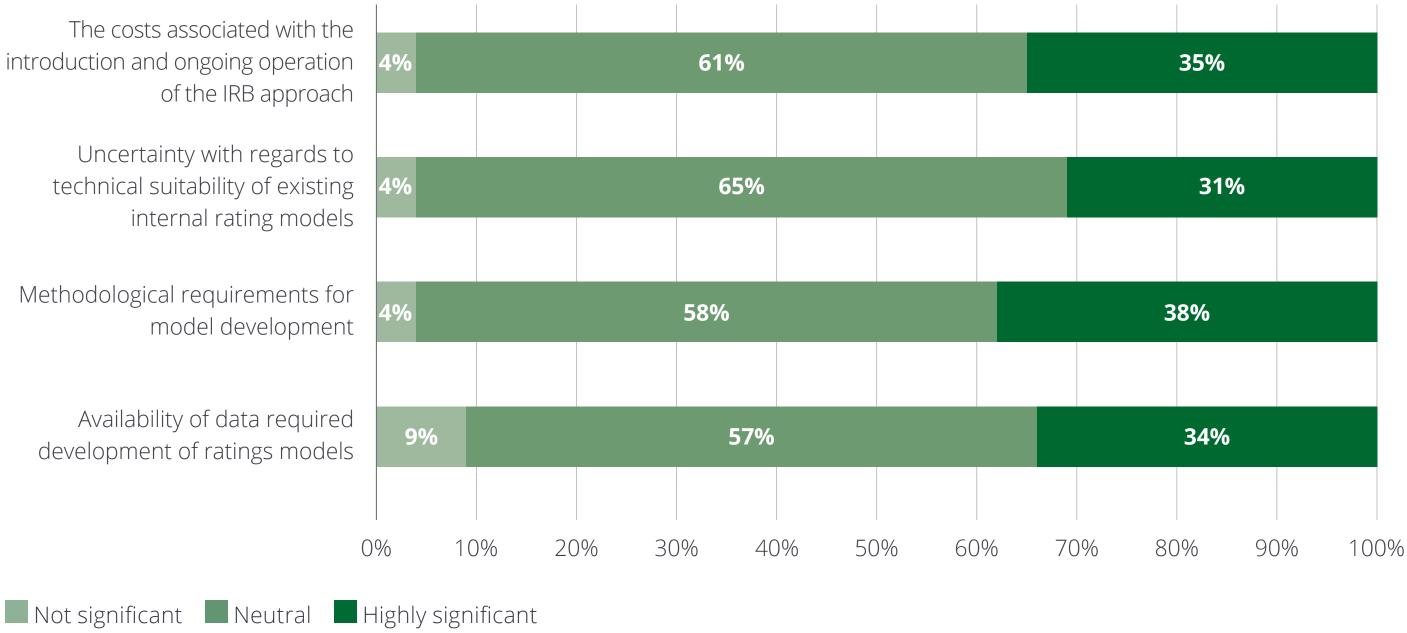


Fig. 26 – IRBA approval challenges



The approval of internal rating models is based to a large extent on the availability of an adequate data history. The use of external data pools can therefore make an important contribution.

We also asked which options SA-CR institutions would prefer in the course of a *possible* IRBA application. Approximately one third of the institutions stated that they prefer either IRBA application on the basis of self-developed rating models or on the basis of external pool-based models. Slightly more than one third, on the other hand, indicate that they prefer a combination of the two approaches. An analysis of the size and geographical distribution shows that German institutions prefer a pool-based approach. This can be explained by the use of rating pool models prevalent in the German market, which are already recognised by the supervisory authorities. When asked to what extent the actual availability of pool rating models would have an impact on IRBA use, 13 of the CR-SA banks indicated that such an option would positively influence the decision to seek IRBA approval.

Fig. 27 – Preferred options in the context of an IRBA application

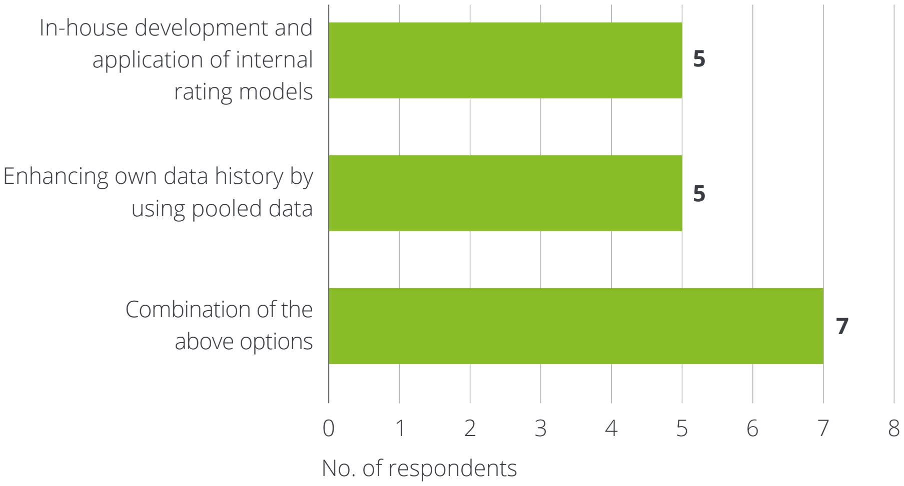
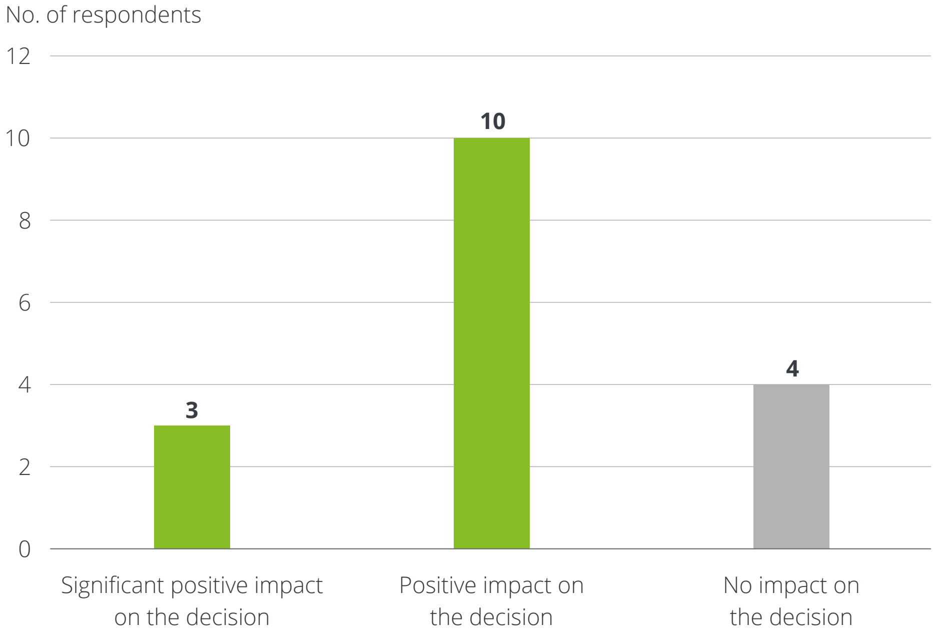


Fig. 28 – Influence of the use of data pools



Benefits of the IRBA from the perspective of IRBA institutions

In contrast to the renaissance of the IRB approach from the perspective of SA-CR institutions, banks already using the IRBA are confronted with the opposite issue: Due to Basel III/CRR III restrictions on the use of the IRB approach (e.g., elimination of LGD and CCF estimates for "low-default portfolios" or introduction of the output floor) the benefits of the IRBA might vanish. At the same time, the ongoing operational costs of operating IRB models have increased in recent years due to a large number of regulatory initiatives (including TRIM, EBA Repair) and the associated capital surcharges as a result of negative validation or audit results.

Fig. 29 – Planned reversion of IRBA portfolios to SA-CR

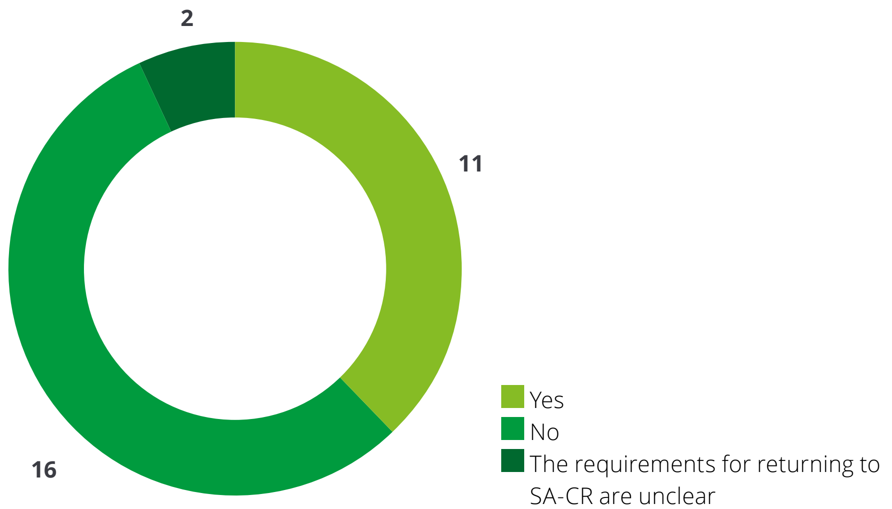
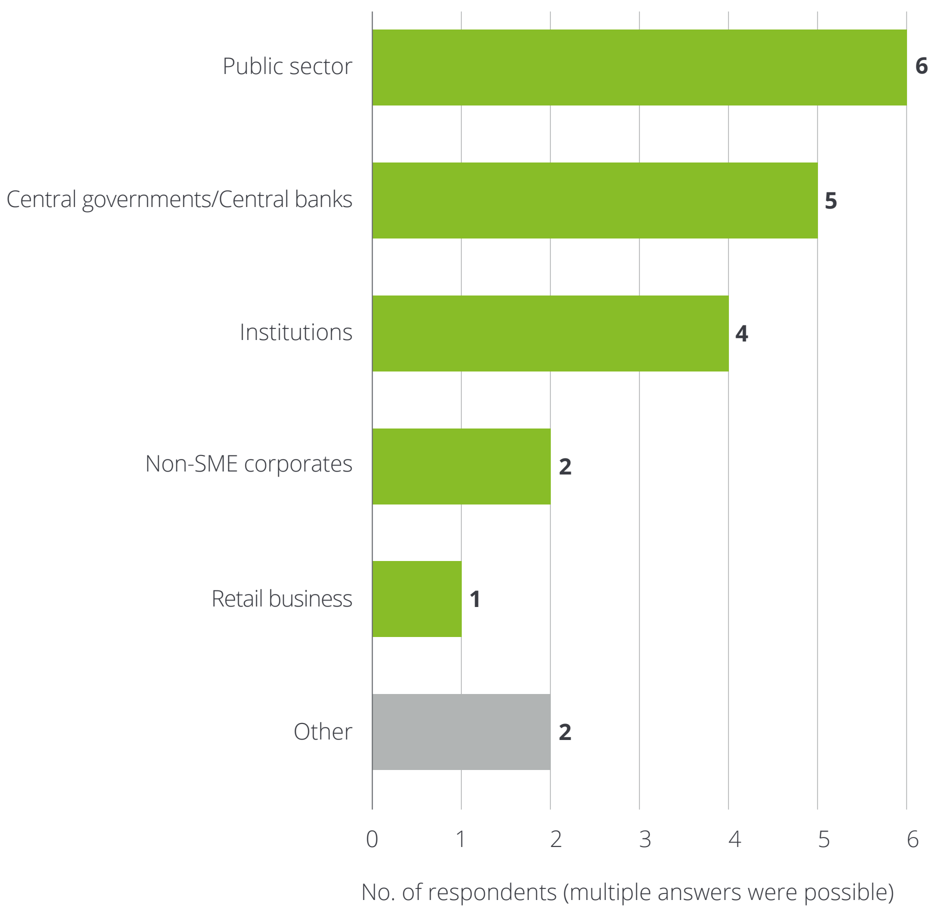


Fig. 30 – IRBA portfolios for possible reversion to SA-CR



Against this background, two out of five institutions state that they have already applied for a return to the standardised approach for selected portfolios or are planning to do so in the course of CRR III introduction. However, almost 40% of institutions polled are open to optimising their IRBA model landscape.

The new requirements concerning risk modelling and output floor limit the benefits of the IRBA. The standardised approach might be more suitable for some banks or portfolios currently using the IRBA.

This "IRBA coverage optimisation" is also in line with the "opt-out clause" from the IRB approach provided for under CRR III in the first three years after its introduction. Here, IRBA institutions are permitted to revert from previous IRB approval(s) against the background of the modified regulatory framework via a simplified supervisory procedure, and to use the SA-CR for these portfolios in the future.

In view of this option, we asked the institutions about their view on a possible return from the IRB approach to the SA-CR. The results show that a return to the SA-CR is typically planned for those portfolios for which the estimation of own risk parameters will only be permitted to a limited extent in the future. In addition to institutions and (non-SME) corporate portfolios, there are also low-default portfolios (central governments, public sector entities) that face particular challenges in terms of modelling and validation, especially with the increase in methodological requirements over recent years.

Finally, the elimination of the overall coverage ratio with the introduction of CRR III, as already mentioned above, is also likely to play a role here. This should make it much easier for IRB institutions to revert those portfolios to CR-SA that were originally transferred to the IRB approach primarily to achieve the minimum coverage and where models may be less robust. All in all, this shows that institutions are already actively reviewing their existing IRBA model landscape in the run-up to the introduction of CRR III.

Effects of the output floor

The output floor newly introduced by the revised Basel framework should lead to a convergence of capital requirements between the different approaches. After the five-year phase-in period the output floor will be 72.5%. This means that for an institution that uses internal models or rating procedures the relevant RWA equal at least 72.5% of the RWA that would have resulted from an institution using only standardised approaches. The maximum benefit (RWA reduction) from the use of internal approaches is thus limited to 27.5% of the standardised approach.

Despite this restriction, 18% of the institutions surveyed are convinced that internal credit risk models will continue to be fully advantageous in the future, and a further 18% expect at least some benefits.

4% of the institutions stated that there is no longer a benefit in the area of credit risk. 28% see at least a limitation of the benefit, while 32% still want to examine the future benefit.

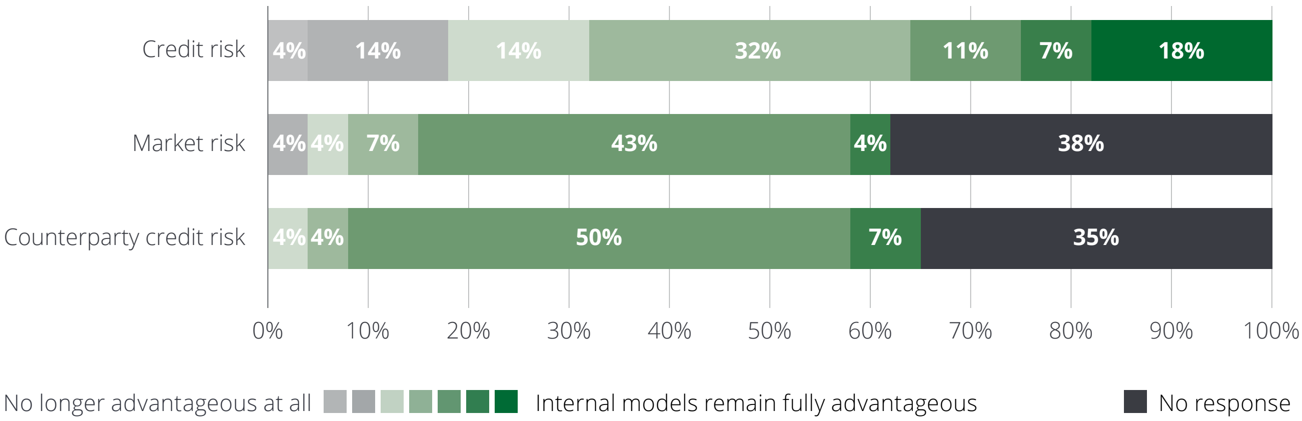
The picture is somewhat different for market risk and counterparty credit risk models: More than one third of respondents did not comment on these aspects. This reflects the fact that internal models for these risk types are less common in regulatory practice – and will likely not be used in the future either.

Regarding market risk models, only 4% still see a slight advantage in the use of internal models in the future, while just as many can no longer see any advantage at all. Another 11% see at least a limited advantage. 43% have not yet examined the benefits.
In this context, it should be noted that the output floor applies at the overall bank level (or at the highest level of consolidation). Institutions that benefit from the full potential capital savings of 27.5% by using IRBA models, would not be able to achieve any additional benefit by using internal market risk models.

This also applies to models for counterparty credit risk. Here, 7% of respondents still see some advantage to using internal models in the future, while 8% expect no benefit.

The output floor is a massive game changer. The pricing of products must therefore be reviewed – by all institutions.

Fig. 31 – Benefits of internal models



For institutions where the output floor becomes binding, total capital requirements increase. In order to achieve an adequate return on capital employed in the future, their product pricing must also be adjusted.

> Most banks have already assessed whether they will be affected by the output floor. Nonetheless, only very few have fully completed the assessment of necessary adjustments in capital management and pricing.

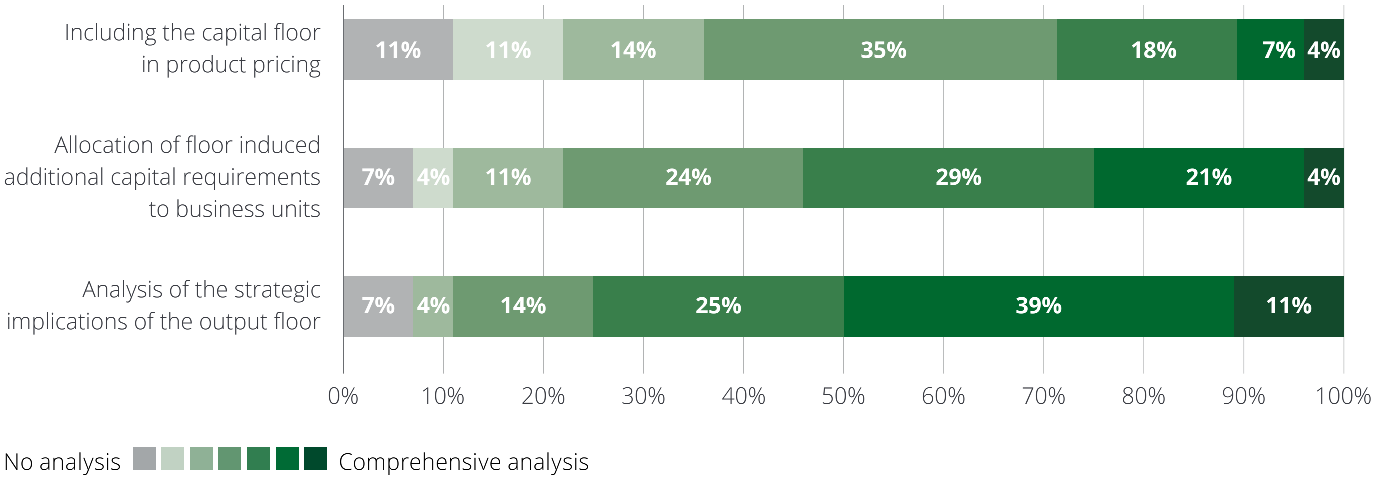
The majority of institutions has already assessed the strategic implications of the new output floor. 11% stated that they had fully completed their analyses in this regard. About two thirds have already carried out comprehensive analyses. Only 7% have not yet started any activities.

When it comes to allocating future additional capital requirements to business areas, institutions are still less advanced. More than half have already made good progress in this respect – but about a quarter still sees themselves at the beginning of the journey. It is important to bear in mind that accurate and comprehensive capital allocation is a prerequisite for pricing considerations.

When asked about the implementation status of an adjusted pricing methodology, however, many institutions stated that they were only at the start of the process at the time of the survey in mid-2022. Just under 40% still saw a need for action, including the 11% that had only just started. Only 4% had already fully adjusted pricing to consider the impact of the output floor. This is in line with observations in the market, according to which the effects of Basel III/ CRR III do not yet play a major role in pricing practice.

However, this is likely to change quite quickly once more institutions complete their analyses. Market pressure will also increase as an ever-greater proportion of new business has maturities that extend into the period in which the application of the output floor becomes effective.

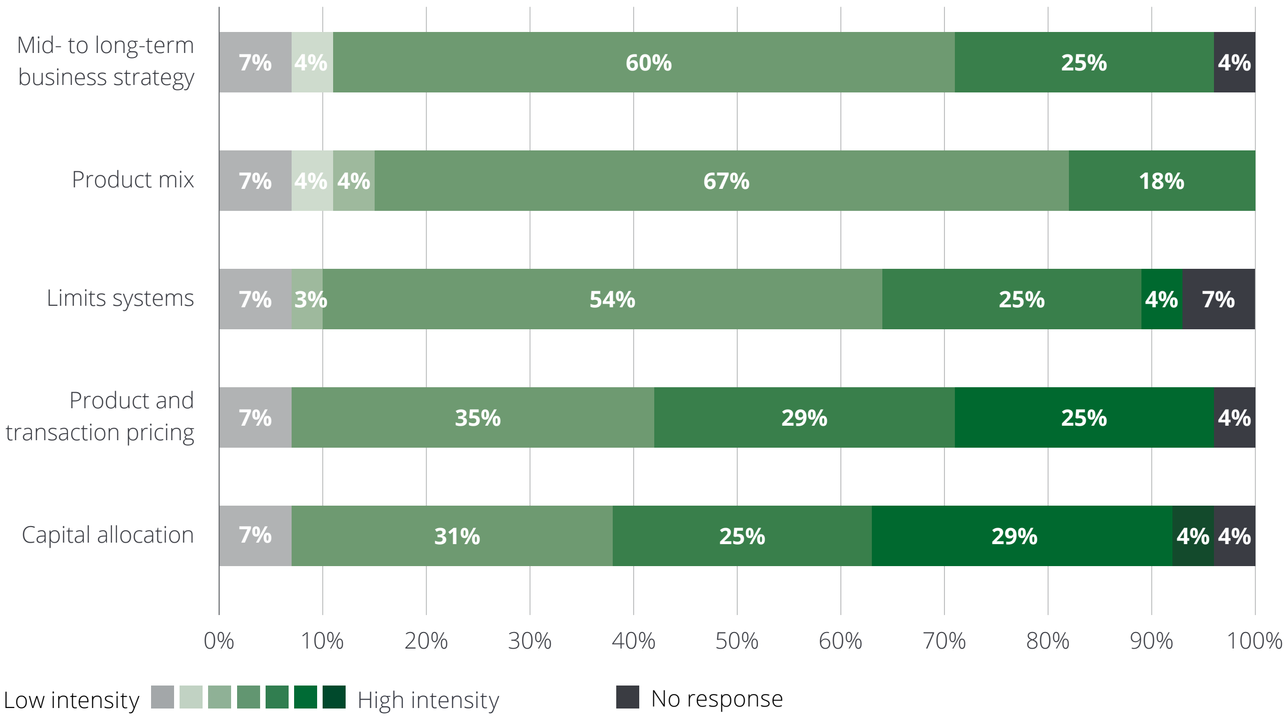
Fig. 32 – Preparation status in light of the output floor



Finally, we asked in which areas the output floor will have an impact. The greatest changes are seen in capital allocation and product pricing. It is worth noting that – as already mentioned – many institutions are yet to complete their analyses in this area.

In the case of limit systems and medium- to long-term business strategy although the majority answered neutrally, among those that expect change, more institutions expect significant rather than insignificant effects. The product mix is rated least critical: More than two-thirds answered neutrally, while only 18% foresee more significant effects.

Fig. 33 – Relevance of the changes brought by the output floor



Overall, it is clear that institutions recognise the importance of the output floor and have analysed its effects to some extent. However, respondents have not yet implemented the necessary adjustments.

In particular, most institutions have not completed the implementation of adjusted capital allocation and product pricing. Only time will tell to what extent – and when – adjusted conditions will be accepted in the market. However, the pressure to act will increase until the new regulations come into force.

Since not every institution will be directly affected by the output floor, there will still be a period in which not every transaction is affected – but at the latest when the transitional arrangements expire, most institutions will no longer be able to take full advantage of their internal approaches. As a large number of institutions will be affected, it is likely that this will have an overall effect on market practices.

Conclusion and outlook

While the future capital framework has been known for quite some time now, the exact regulatory requirements are yet to be finalised. Our report shows that many banks have already assessed the impact of the new rules on capital requirements and – to a lesser extent –on their IT environments.

The actual impact will vary significantly depending on the individual bank's portfolio and strategy. There is no one-size-fits-all solution, which means that banks that have not yet assessed the effects of the new framework should do so swiftly to avoid unforeseen negative outcomes.

Changes to the capital requirements for credit risk are at the heart of the reforms. Thus, most banks in our sample see more relevance in this area than, for example, in market risk or CVA. Nevertheless, banks with significant trading portfolios will need to ensure they understand the implications of these changes in detail.

The new output floor is a game changer for the use of internal ratings and risk models. Additional models will not lead to extra capital relief once the threshold level (72.5% of standardised approach RWA) has been reached. Given the cost of running regulatory models, a review of the model landscape is advised. Since banks are permitted to revert to the standardised approach under CRR III for a period after implementation, this could be a feasible option for some portfolios (or the entire bank).

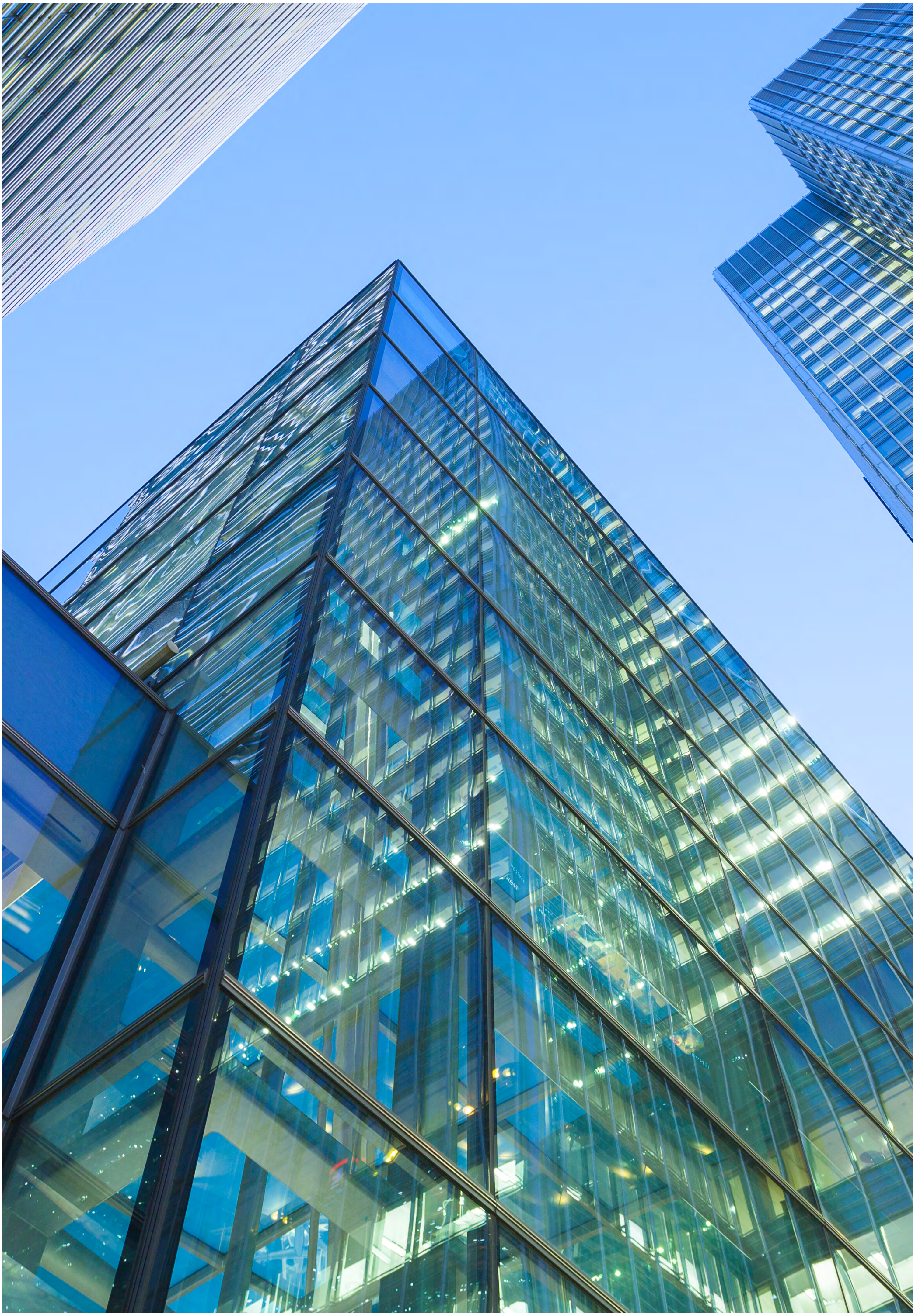
At the same time, the majority of banks in our sample expects a – sometimes significant – increase in capital requirements. For those banks which currently use the standardised approach for regulatory reporting, the IRBA may still be attractive despite the output floor. Since the general conditions to apply for the IRBA become more flexible in the CRR III, this approach is now in reach for more banks. The use of external data to supplement the internal loss history can further help banks to obtain regulatory approval to use the IRBA. By means of pooled data and/or pool models, the IRBA comes within reach for additional institutions. The availability of such pooled solutions has a positive impact on the decision to apply for the IRBA in the future.

As the IRBA or other internal models can generate up to 27.5% rebate on RWA, a change of the regulatory approach could help to meet the upcoming capital requirements – while always noting the general regulatory prohibition against "cherry-picking" regulatory capital approaches in order to minimise capital requirements.

Only a few banks are currently incorporating the new regulatory requirements in capital management and pricing. This is somewhat surprising, since any transactions with a maturity later than 2025 are likely to fall under the new rules over time. The implementation of the revised processes will require strategic management decisions, which typically take some time. Banks should intensify their efforts in this area now in order to ensure that when capital requirements increase they are able to meet their ROI targets by reflecting RWA increases in pricing and ensure that competitors anticipating lower capital requirements for particular transactions don't generate a pricing and competitive advantage.

It will be important to monitor the market and observe how fast competitors adopt the new framework. Our survey has demonstrated that many banks have already started to assess the need for change and will soon start their implementation projects, if they have not done so already. Banks need to ensure they do not fall behind in this regard. As with all regulatory projects, the implementation deadline is mandatory. A further postponement of the implementation deadline in the EU is unlikely, given the BCBS framework was finalised and published at the end of 2017. Some jurisdictions are aiming for earlier implementation, which needs to be taken into account in multinational projects; yet another reason not to hesitate further.

Deloitte can support banks with analyses of the individual impact and in implementing the necessary changes. Please contact our experts to discuss your needs. We thank all the banks which participated in the survey as well as RSU GmbH & Co. KG for their input and discussions.



Footnotes

[1] www.bis.org/publ/bcbs189.pdf.
[2] Regulation (EU) 575/2013.
[3] www.bis.org/bcbs/publ/d424.htm.
[4] As the CRR III differs in detail from the BCBS framework, the differentiation may be necessary.
[5] www.bis.org/press/p200327.htm.
[6] Quantitative Impact Studies (QIS), cf. www.eba.europa.eu/risk-analysis-and-data/quantitative-impact-study/basel-iii-monitoring-exercise.
[7] RSU GmbH & Co. KG (www.rsu.one).
[8] Staff members involved in the implementation of the new rules were approached via personal contacts from Deloitte and RSU to obtain meaningful responses.
[9] Cf. www.eba.europa.eu/eba-publishes-its-report-first-mandatory-exercise-basel-iii-full-implementation-impact.
[10] The draft CRR III provides for a grandfathering of the current treatment of historic and strategic equity investments. If such equity investments meet certain criteria, the expected RWA increase for equity expoures could be reduced.
[11] Cf. www.eba.europa.eu/risk-analysis-and-data/quantitative-impact-study/basel-iii-monitoring-exercise, www.bis.org/bcbs/publ/d426.htm and www.bundesbank.de/en/tasks/banking-supervision/legal-basis/basel-framework/basel-iii-monitoring-622584.
[12] This requires the borrower to have an eligible external rating. In Europe, this is often not (yet) the case. This lack of reduction in practice could be one of the reasons for the stronger increase in RWA at European institutions.
[13] The impact of CRR III on the choice of regulatory approaches is discussed separately in the chapters about the benefits of SA-CR (see p. 30 ff.).
[14] The thresholds for IRBA application vary from country to country, but as an effort to avoid cherry picking, as of today the IRBA must cover significant parts of the entire loan portfolio.

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