KPMG

Continuing the journey

Risk and ICAAP Benchmarking Survey 2016

Insights into evolving risk management practices for investment firms.

November 2016

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Introduction

David Yim
Partner

I'm delighted to present KPMG's latest benchmarking report of risk management and ICAAP practices for investment firms.

Last year, our study revealed how firms could benefit from getting their ICAAP submissions "right from the start". This time we have delved deeper, looking at a comparable number of firms and their ICAAPs but also examining their underlying risk processes – how they identify, assess, monitor and report risk, which are critical components of the ICAAP. It is also exciting this year to be working with the loss data consortium ORIC International, whose data and analysis have supplemented our observations.

The topics we have studied are very much front-of-mind in the market today. As recently as September 2016, the FCA issued three letters of guidance following a draft consultation document on wind-down planning in May 2016 and a statement on good practice in relation to liquidity risk in February 2016. We welcome this guidance – it is our intention that this report also forms part of the process of helping the industry achieve best practice in this important area.

We further welcome the European Banking Authority's (EBA's) report on the Investment Firm Review, as mandated by the Capital Requirements Directive, which seeks to review the prudential regime applicable to investment firms. We acknowledge the EBA's discussion paper resulting from their recent data gathering exercise. This represents a real opportunity to shape the future prudential regime and we encourage all investment firms to provide feedback on this now it has been published.

Our latest study shows that the industry is becoming more sophisticated in its risk management and ICAAP practices. It's clear that more firms are "getting it", but there is more work to be done: for example, this year has seen one major investment house scrutinised for its level of insurance mitigation, something that was flagged as a potential issue in our 2015 report.

Importantly, though, this year's study points to further opportunities for investment firms to enhance their processes. In many firms, risk remains a separate discipline rather than something that is embedded in the decision-making process. Further work is required by firms to demonstrate board level engagement in risk identification and reporting, an ongoing area of concern for the regulator. And with the issuance of draft guidance, the regulator has raised the bar on its expectations on the subject of wind-down planning. Firms will need to revisit the details of their arrangements in order to ensure market practices keep pace with evolving expectations.

This is the message from our 2016 report: Continuing the journey. Good market practices continue to evolve. Firms need to continue their efforts to ensure risk management processes are effective – not only to meet the regulatory agenda, but more importantly to protect the interests of customers and stakeholders.

Executive summary

Continuing the journey shows a picture of increased sophistication combined with more opportunity for investment firms to improve their risk management practice. On the one hand, firms' ICAAP submissions have improved in 2016, particularly in the area of assessing operational risk. On the other, when we assessed broader risk management processes, it became apparent that there is progress to be made in order for risk management to reach its true potential.

Risk management still separate

In many firms the Chief Risk Officer (CRO) is still not a board-level role. Risk management is often treated as a separate discipline rather than being embedded into a firm's day-to-day operations. The FCA has consistently identified governance and culture around risk management, and the degree to which it is embedded within organisations, as a weakness.

There is often misalignment between risk appetites and risk management tools, and firms are finding it challenging to assess and develop the right Key Risk Indicators (KRIs). RCSA processes are often inadequate and few firms are considering the impacts of macro trends, such as Brexit.

The importance of integrated scenarios and stress test analyses

Our study also reveals that scenario analyses and stress tests are not fully integrated into the decision-making process. Firms are not fully identifying their potential vulnerabilities and impacts. For example, investment firms often underestimate their liquidity risk.

An important tool for the business, stress tests and scenario analysis should help firms develop robust risk management processes that add value to strategic decision making.

Focus on wind-down planning

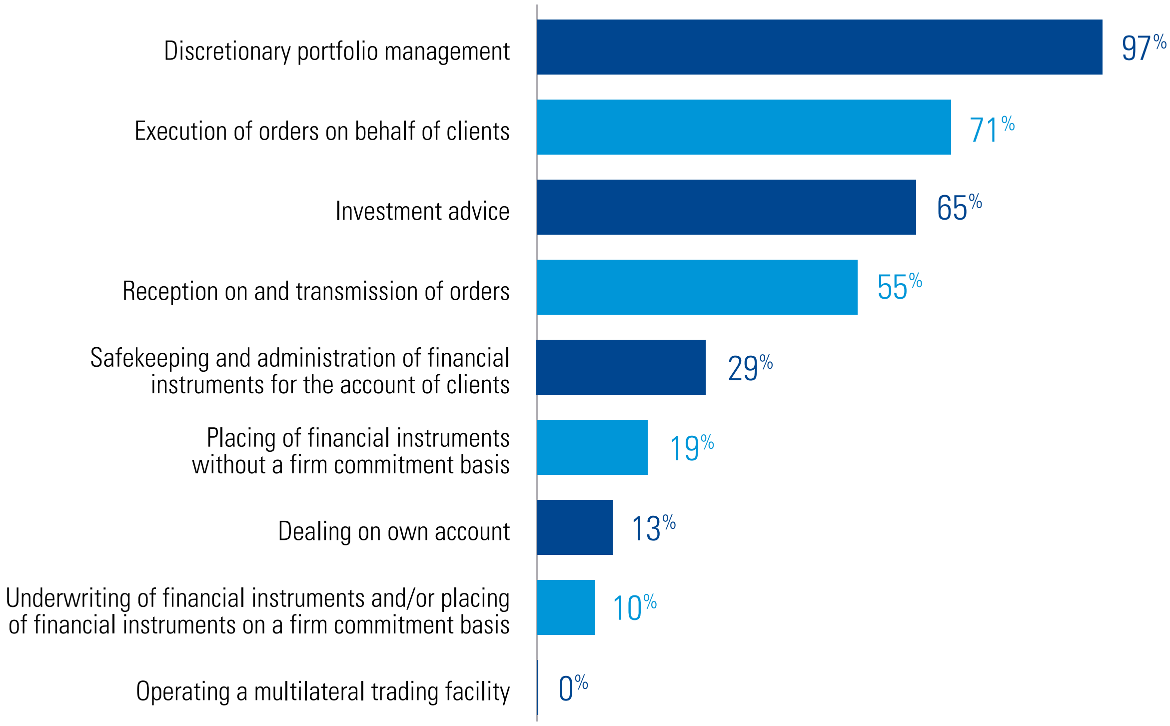
There has been improvement in wind-down plans, and the recent draft FCA guidance on the subject is welcome. However our benchmarking report shows that many firms are still insufficiently prepared for an orderly wind-down. This is a cause for concern given the systemic impact of some firms.

About the research

About the research

This report, which was conducted in Q3 2016, is based on a study of 31 investment firms, excluding banks. Participants are authorised for the MiFID activities described in the table below and manage clients' assets ranging from £5 billion to £300 billion.

Firm's profile - authorised MiFID activities



With the publication of the Capital Requirement Directive IV (CRD IV), the FCA created a prudential sourcebook (IFPRU) which applies to certain FCA regulated investment firms who are subject to the more stringent requirements of CRD IV. Other firms continue to be subject to the requirements of CRD III and its prudential sourcebook BIPRU. Firms are classed as either BIPRU or IFPRU, depending on their authorised MiFID activities, which in turn determines their risk profile.

BIPRU

BIPRU firms are only authorised to carry out one or more of the following MiFID investment services and activities:

- Reception and transmission of orders in relation to one or more financial instruments;
- Execution of orders on behalf of clients;
- Discretionary portfolio management; and
- Investment advice.

Provided that they (1) are not Collective Portfolio Management Investment firms (CPMIs), (2) do not hold money or securities belonging to their clients.

BIPRU firms are subject to the CRD III

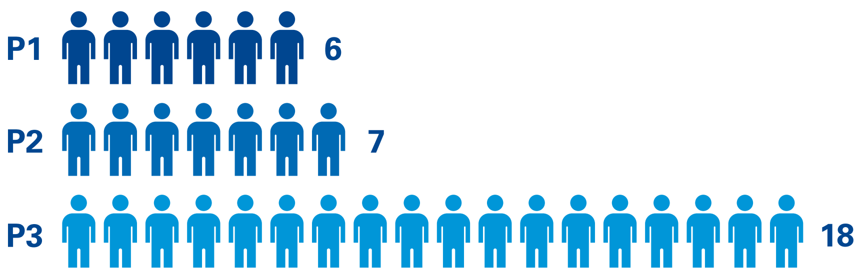
IFPRU

Firms are considered as IFPRU if they carry out one or more of the following MiFID investment services and activities:

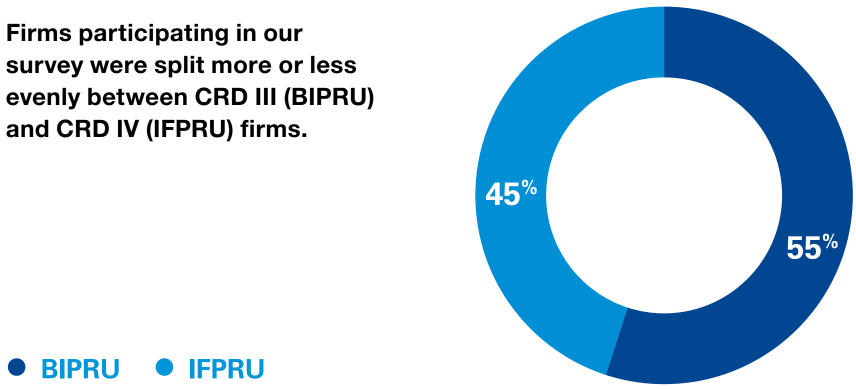
- Dealing on own account;
- Underwriting of financial instruments and/or placing of financial instruments on a firm commitment basis;
- Operating a multilateral trading facility; and/or
- Safekeeping and administration of financial instruments for the account of clients, including custodianship and related services such as cash/collateral management.

IFPRU firms are subject to the CRD IV

This year's KPMG Risk and ICAAP Benchmarking Survey includes a range of firms by prudential category:



Firms participating in our survey were split more or less evenly between CRD III (BIPRU) and CRD IV (IFPRU) firms.



Additionally, the FCA classifies firms based on their prudential significance as follows:

P1 firms

Firms and groups whose failure could cause significant, lasting damage to the marketplace, consumers and client assets, due to their size and market impact. This might be the case for example, because a particular market is highly concentrated, so that a disorderly failure of one player could not easily be assimilated by the others.

P2 firms

Firms and groups whose failure would have less impact than P1 firms, but would nevertheless damage markets or consumers and client assets. This might be the case where there is a smaller client asset and money base or an orderly wind-down can be achieved.

P3 firms

Firms and groups whose failure, even if disorderly, is unlikely to have a significant market impact. They have the lowest intensity of prudential supervision.

P4 firms

P4 firms are those with special circumstances — for example, firms in administration, for which bespoke arrangements may be necessary.

Contents

Supervisory Review and Evaluation Process

Supervisory Review and Evaluation Process

The Financial Conduct Authority (FCA) is responsible for the prudential supervision of investment firms.

Firms authorised by the FCA are subject to a supervisory visit by the FCA known as the 'Supervisory Review and Evaluation Process' (SREP). The SREP replaces the previous supervisory framework known as 'Advanced Risk Responsive Operating Framework' (AROW) visits.

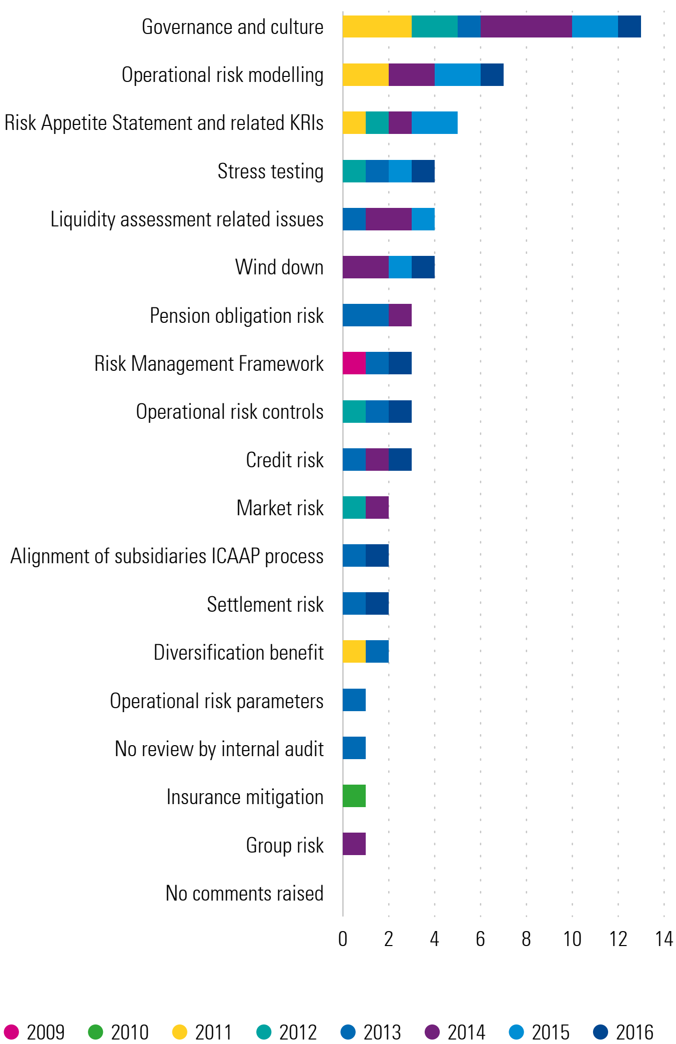
The SREP is a supervisory tool, which the FCA uses to review and evaluate a firm's business model, governance, risk management processes and controls. It enables the FCA to evaluate a firm's assessment of capital and liquidity risk, and whether they have adequate resources to cover these risks. The FCA assesses these components through a review of the firm's Internal Capital Adequacy Assessment Process (ICAAP).

Following a SREP visit, if the FCA raises concerns with a firm's approach to risk management and capital assessment, firms will be issued with an Internal Capital Guidance (ICG), capital add-on, scalar (operational risk or governance) and/or RMP.

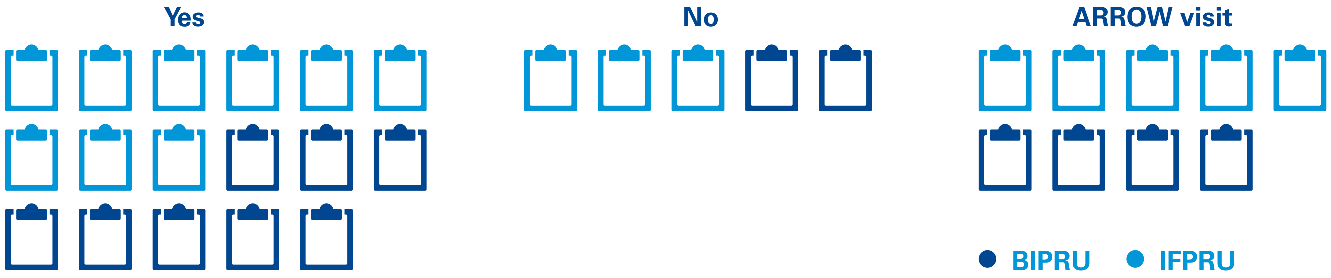
Of the firms that took part in this year's survey, 26 out of 31 have been subject to a SREP (or ARROW) visit.

While the nature of the issues raised by the FCA is diverse, we have identified a number of common areas of regulatory focus. These are highlighted in the diagram on the right:

Regulator's issues raised per year



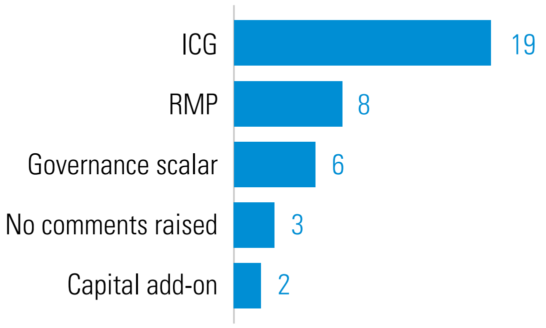
Has the firm ever had a SREP visit?



In order to identify the most current areas of regulatory focus, the issues raised in the last two years include:

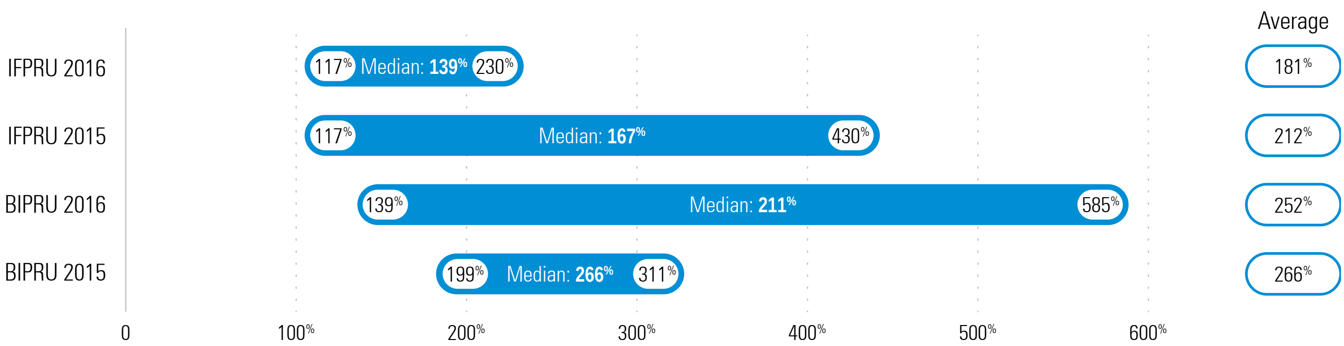
- Governance and culture
- Operational risk modelling
- Risk Appetite Statement (RAS) and related Key Risk Indicators (KRIs)
- Stress testing
- Wind-down
- Risk Management Framework
- Operational risk controls
- Alignment of subsidiaries ICAAP process
- Settlement risk

Amongst firms that have been subject to a SREP, only three have not received comments from the FCA (12%):

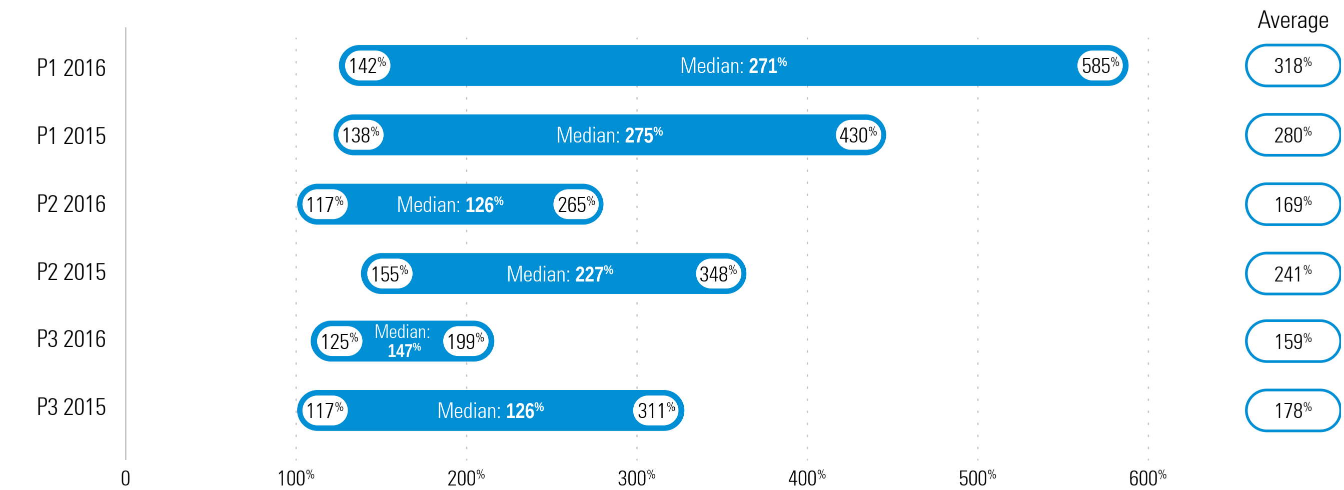


The following graphs detail the level of ICG level by IFPRU/BIPRU firms, reflecting the respective complexity of these firms.

ICG (% of Pillar 1) in 2015 and 2016 by BIPRU or IFPRU



ICG (% of Pillar 1) in 2015 and 2016 by prudential category



Enterprise Risk Management

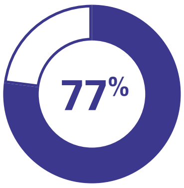
Risk appetite and Key Risk Indicators (KRIs)

When carrying out business, firms have to answer two fundamental questions:

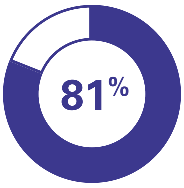
- What risks is the firm willing to accept to achieve its performance objectives?
- How does the firm ensure that it is operating within its risk appetite?

While 84% of our participants have a formal risk appetite policy in place, 32% of these firms fell short of the minimum information expected within a risk appetite policy.

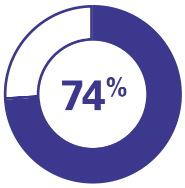
What is contained within the risk appetite policy?



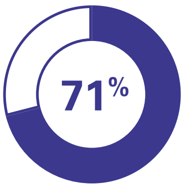
The formal approval process



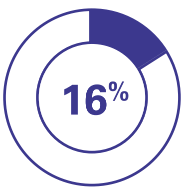
How the Risk Appetite Statement is determined



The frequency by which it is reviewed



All of the above



The firm does not have a risk appetite policy

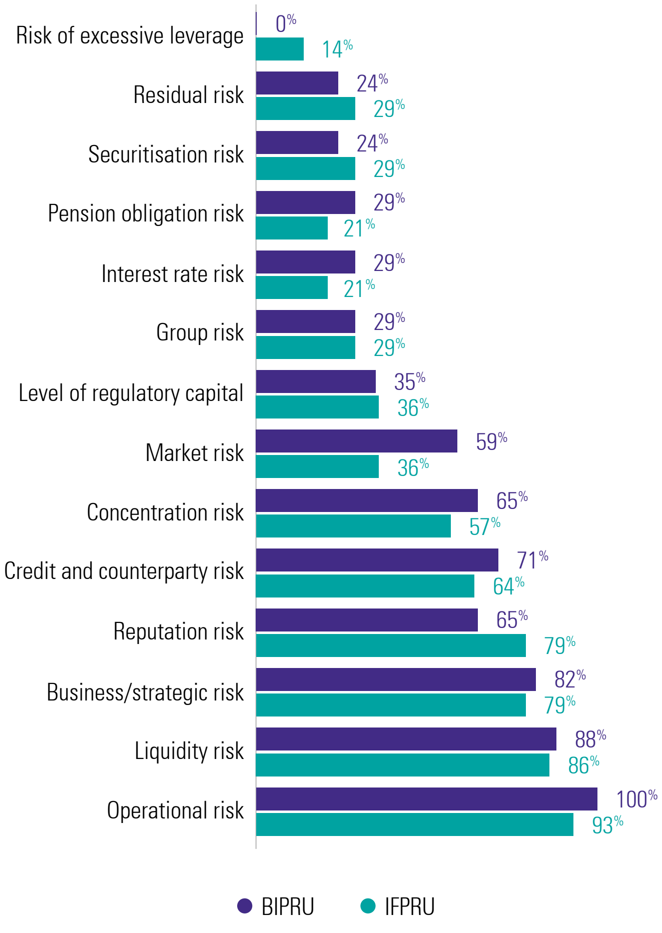
A good Risk Appetite Statement (RAS) should have the following characteristics:

- The RAS should form an integral part of a firm's strategic planning process and should align with a firm's strategy.
- There should be an adequate understanding and communication of the firm's risk appetite by the Board and senior management to support the achievement of the firm's goals.
- The RAS should be adequately monitored, reported and updated as necessary.

KPMG's Benchmarking Survey also outlines disparities in risks captured by the RAS. While every firm's risk appetite should be unique, as it is dependent on each firm's business environment and strategy, we would expect to observe a degree of alignment of risks captured by investment firms.

Additionally, our analysis indicates that BIPRU firms seem to take the lead in relation to risks captured in their RAS compared to IFPRU firms. The graph on the right demonstrates that BIPRU firms appear to give more consideration to areas such as market risk or credit and counterparty risk, which we would intuitively expect more IFPRU firms to have considered.

Risks captured by the RAS — BIPRU/IFPRU

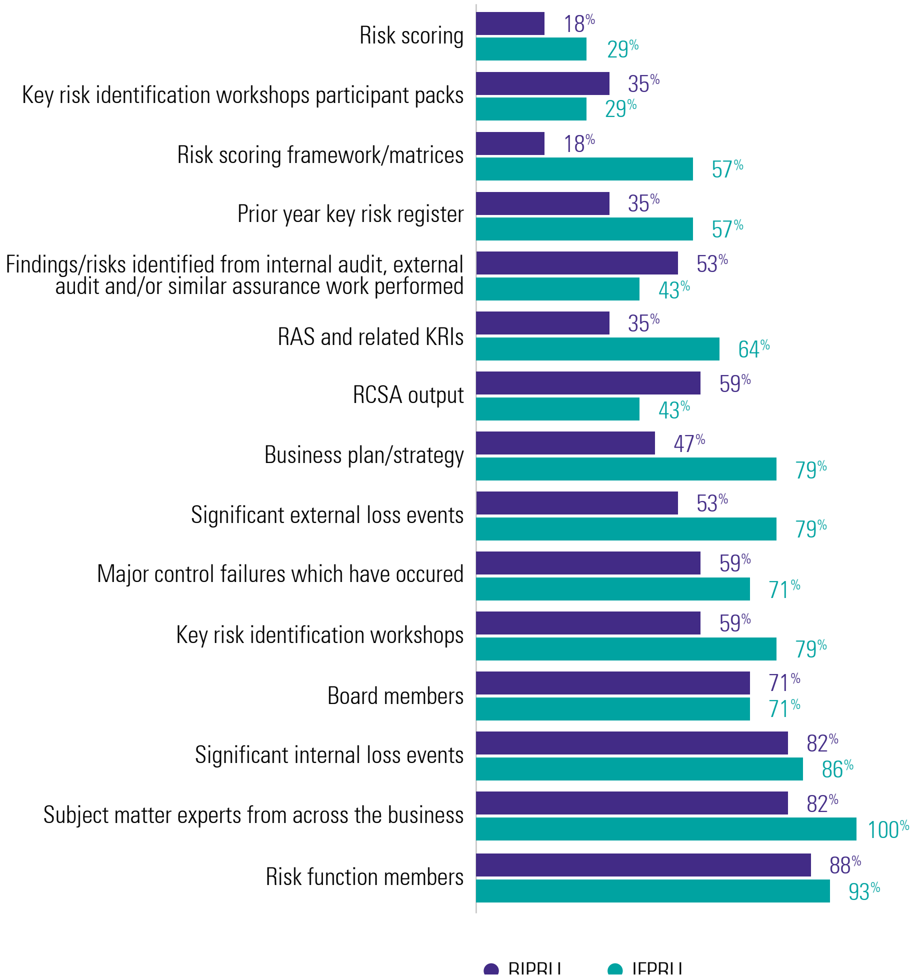


Factors captured by firms' key risk identification processes

The risks captured in a RAS will vary and depend on a firm's specific strategy, scale and complexity. The disparity between risks captured by the RAS could partially be explained by the differences in firms' risk identification processes. This is supported by our graph which indicates that IFPRU firms have a more complete process for identifying key risks.

The graph highlights the varying degrees of maturity in firms' risk identification processes.

Our benchmarking data suggests that IFPRU firms have a more complete process for identifying key risks. This is surprising given our previous observation in relation to the extent to which risks are captured by the RAS. While the processes appear to be more complete, this could call into question the robustness of such processes.

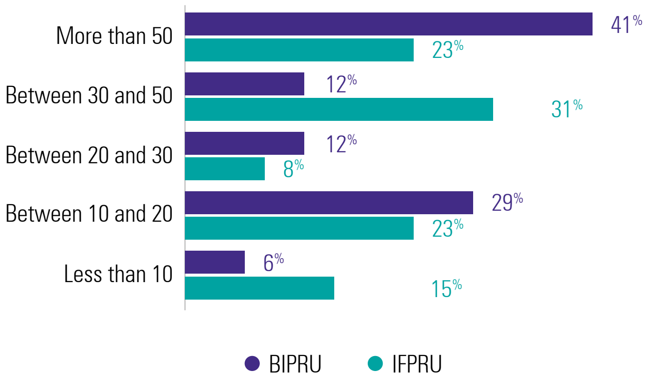


Monitoring of risk appetite

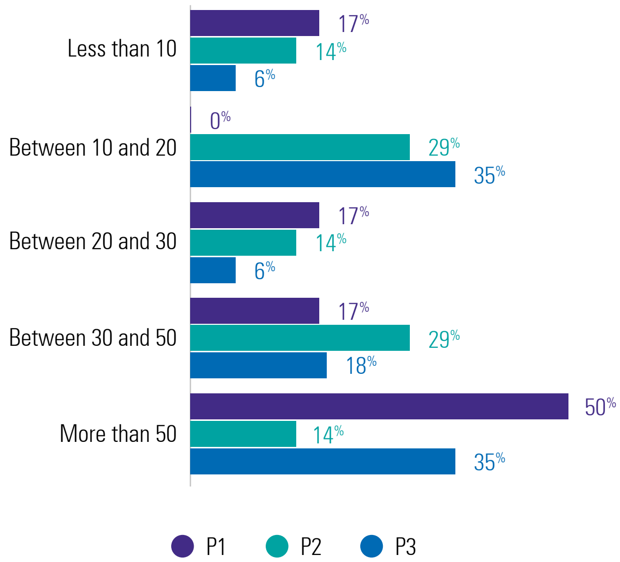
Our benchmarking survey outlines that while the majority of respondents have quantitative and qualitative RAS metrics in place (94%), the number of operational risk KRIs, a key risk for investment firms, varies substantially between firms.

The graphs below highlight the fact that the number of KRIs developed does not necessarily correspond to either a firm's AUM or the nature of activities it undertakes.

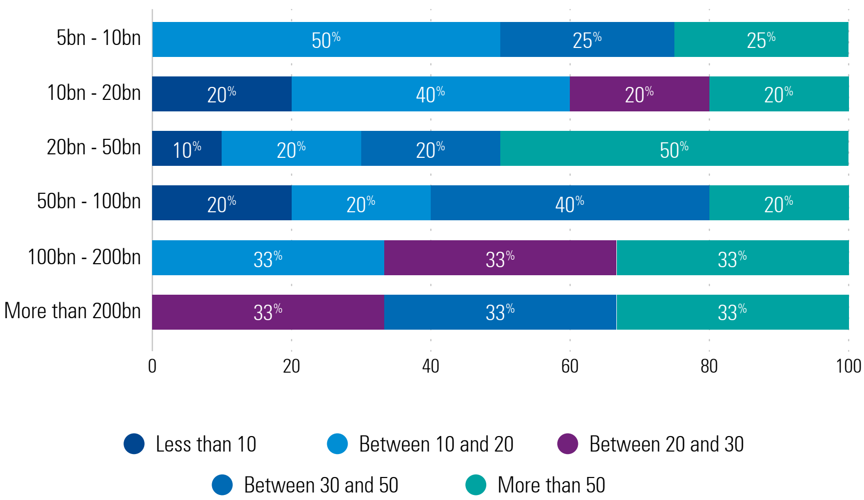
KRIs - IFPRU/BIPRU



KRIs - prudential category



Number of KRIs per AUM

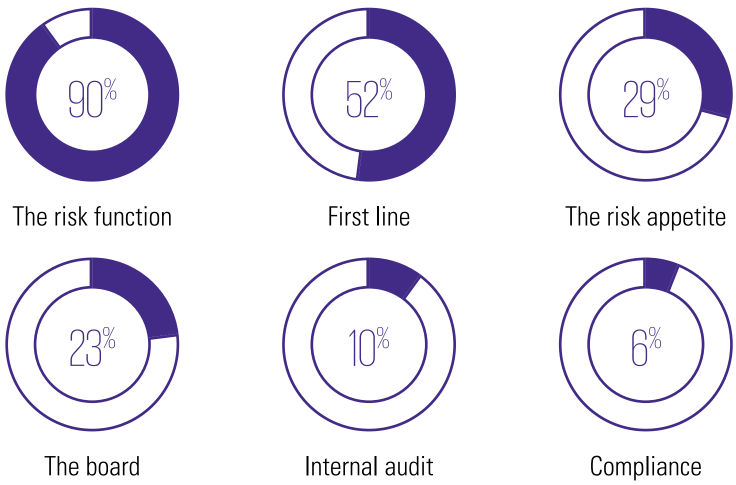


Get on board

KPMG's Benchmarking Survey shows that, in the vast majority of cases, the risk function determines the risk information that is escalated to the board. In fact, only 23% of respondents said that the board was involved in the determination of risks escalated to them. This could call into question the level of board engagement in firm-wide risk oversight. Since the financial crisis, the regulator's expectations for board engagement in enterprise-wide risk oversight has increased significantly.

The graph below further highlights that only two firms involve the compliance function in this process despite the strong links between risk and compliance disciplines.

Who is involved in the determination of risks escalated to the board?



KRI objectives

1. Monitor current level of risk
2. Act as early warning indicators
3. Report risk level in a timely manner
4. Support an effective risk appetite statement

Desirable characteristics of KRIs

1. Measurable
2. Comparable
3. Auditable
4. Timely
5. Easy to monitor

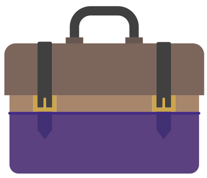
The Basel Committee on Banking Standards (BCBS) identifies seven key operational risk categories:

Operational risk

- Execution Delivery and Process Management (EDPM)
- Business Disruption and System Failures (BDSF)
- Clients, Products and Business Practices (CPBP)
- Internal Fraud (IF)
- External Fraud (EF)
- Employment Practices and Workplace Safety (EPWS)
- Damage to Physical Assets (DPA)

ORIC International insights - KRIs per Basel operational risk categories

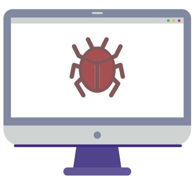
40%
Clients, Products and Business Practices



36%
Employment Practices and Workplace Safety

26%
Internal Fraud

18%
Execution, Delivery and Process Management



18%
Business Disruption and System Failures

3%
External Fraud

3%
Damage to Physical Assets

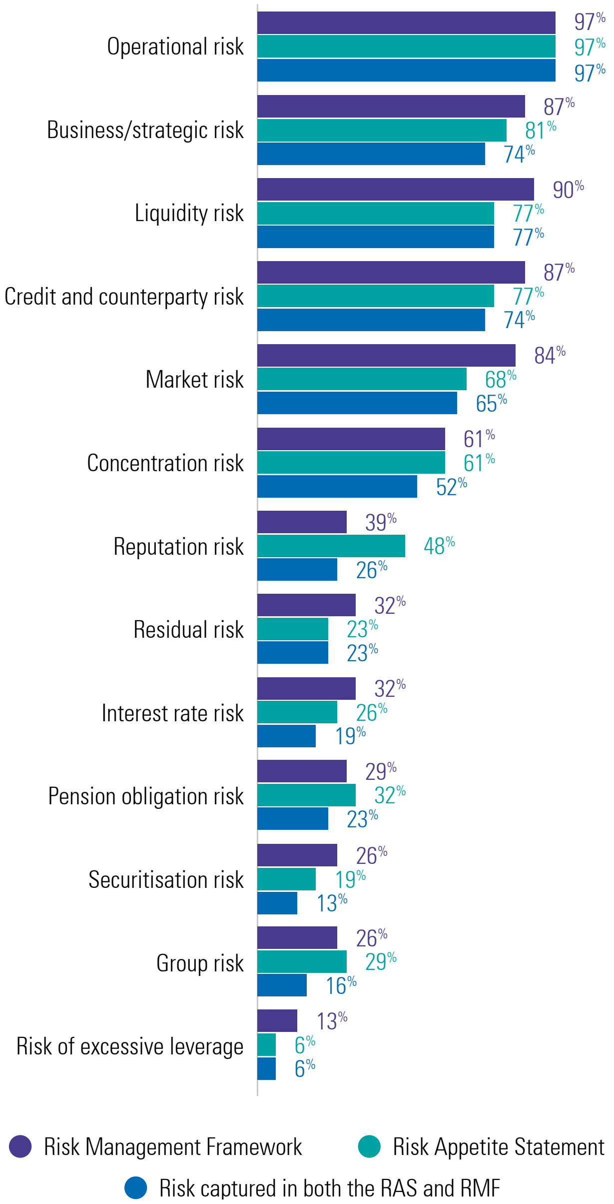
Overall we have observed some positive trends in risk management practices compared to 2015:

84%	of participants have a formal risk appetite policy
94%	of respondents have in place quantitative and qualitative RAS metrics compared to 88% in 2015
84%	of this year's survey respondents have performed an exercise to formally link all KRIs to their risk appetite and key risks; an improvement compared to the misalignment between the RAS and the KRIs observed in 67% of last year's survey respondents
68%	of the respondents have developed both leading and lagging indicators compared to 59% in 2015
71%	of the respondents review and refresh key risks on at least a quarterly basis compared to 63% in 2015

The development of a successful Risk Appetite Statement is important as it is the first stage of a firm's Risk Management Framework. Get it wrong and this could have detrimental knock-on effects for other framework components.

Risk Management Framework

Misalignment between the RAS and the RMF



Recent events have highlighted the importance of having an enterprise-wide Risk Management Framework that captures all of the risks to which a firm is exposed and the relationship between those risks.

By definition, risks captured in the firm's RAS should be reflected in the firm's Risk Management Framework. However, KPMG's Benchmarking Survey highlights, except for operational risk, a misalignment between risks captured in the Risk Management Framework and in the RAS.

Information captured in the Risk Management Framework

Our study highlights a large variation in the type of information captured within the Risk Management Framework:

KPMG's survey highlights that:

45% of this year's respondents have developed their own risk taxonomy for the board

74% of this year's respondents make use of a scoring process

Focus on liquidity risk management in funds

In February 2016, the FCA published a review[1] of large investment management firms to understand how they manage liquidity risk in their funds:

- Firms should improve their processes to ensure that the fund dealing (subscriptions and redemptions) arrangements are appropriate for the investment strategy of the fund
- Firms should perform a regular assessment of liquidity demands
- Firms should perform ongoing assessment of the liquidity of portfolio positions
- Firms may consider the use of liquidity buckets
- Where necessary, firms should have in place an independent risk function that monitors portfolio bucket exposures regularly and reports breaches to the set limits
- Firms should perform stress testing to assess the impact of extreme but plausible scenarios on their funds

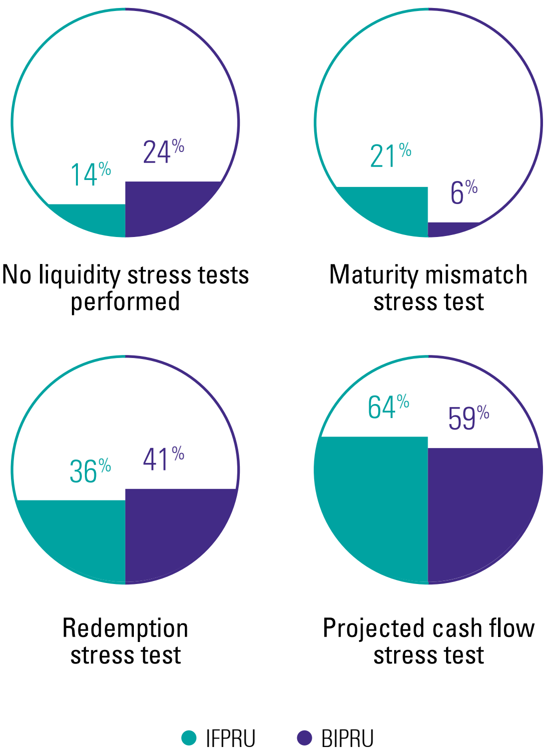
Our 2016 Benchmarking Survey revealed variations in firms' consideration and treatment of liquidity risk.

Based on questionnaires received:

- 28 firms have developed an individual liquidity risk management framework
- 26 firms formally consider liquidity risk in their RMF
- 24 firms capture this risk in their RAS
- 20 firms have consistently captured liquidity risk in their RAS and Risk Management Framework, as well as developed a liquidity risk management framework.

There is a growing concern in relation to liquidity risk from the regulator and the graph below shows that, while the majority of respondents have developed liquidity stress tests, there is still some way to go to ensure that liquidity risk is adequately captured and monitored.

Liquidity stress test by IFPRU/BIPRU



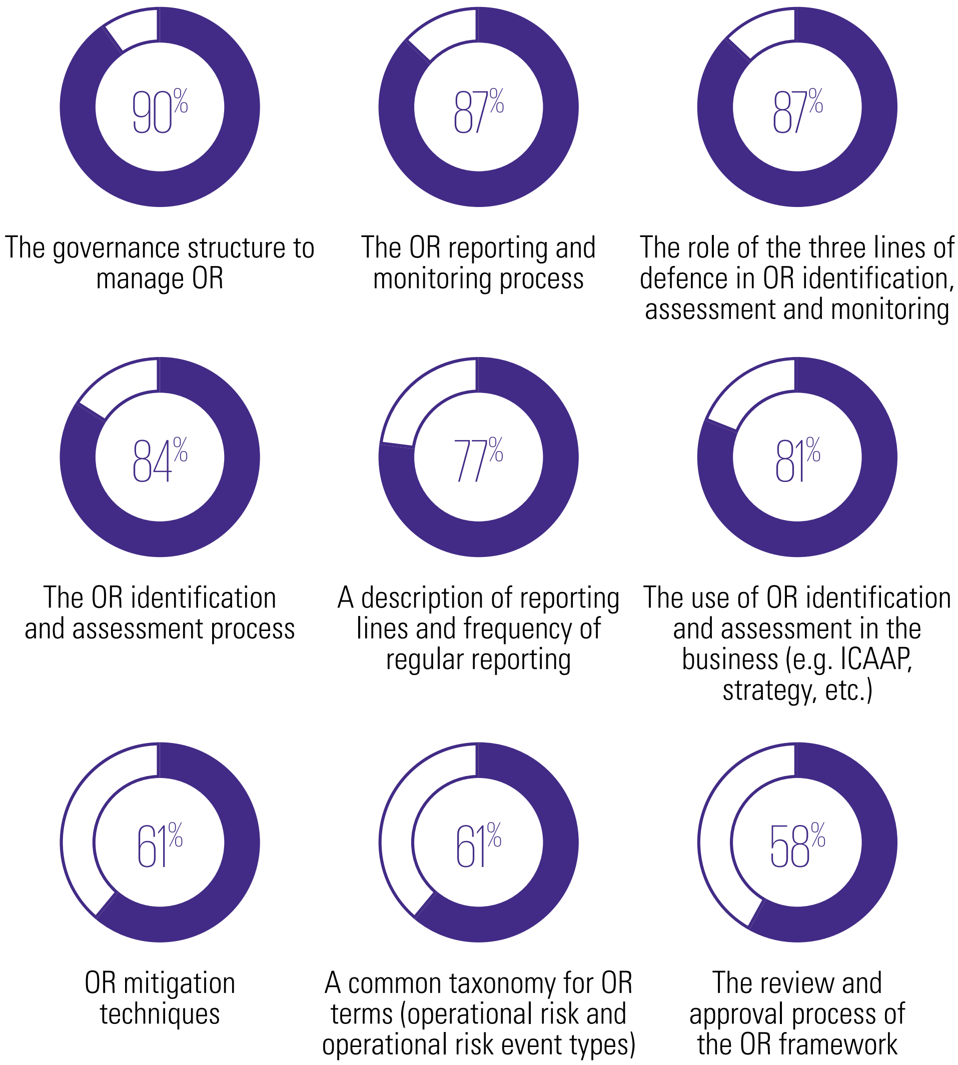
1. https://www.fca.org.uk/news/liquidity-management-for-investment-firms-good-practice

Operational risk management

The Operational Risk Management Framework includes:

Strong Operational Risk (OR) management is key for investment firms given that, as agency-based businesses with generally few on-balance-sheet risks, operational risk is commonly the most material risk.

KPMG's Benchmarking Survey highlights that 94% of this year's survey respondents make reference to the firm's overall risk appetite and strategy in the Operational Risk Management Framework. While the majority of respondents this year have in place an Operational Risk Management Framework, there is still some divergence in the level of information captured. This demonstrates different levels of maturity in this process across the firms.



Risk and control self-assessment

Risk and Control Self-Assessment (RCSA) spans multiple stages of the risk management process, including risk identification and measurement as well as control assessment, and links into scenario analysis.

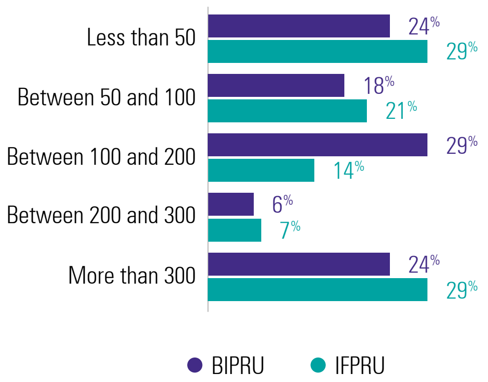
The FSA's (Financial Service Authority) guidance on operational risk (*Enhancing frameworks in the standardised approach to operational risk*) highlights that most firms conduct some sort of RCSA. The process is internally driven and often incorporates checklists and/or workshops to identify the strengths and weaknesses of the operational risk environment. The most effective RCSAs address inherent risks as well as the controls to mitigate them.

The graphs below highlight variations in the number of risks captured by firms.

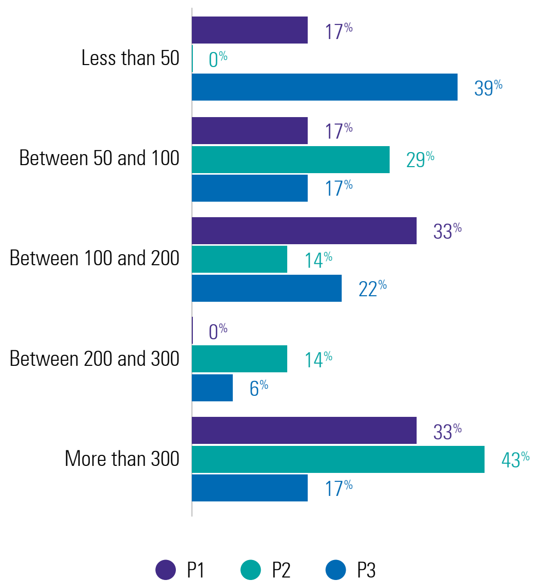
The difficulty of the RCSA exercise lies in finding the adequate level of granularity in risk identified.

A common issue faced by firms attempting to implement a successful RCSA process is striking the right balance between embedding a granular RCSA with effective routine risk management. A granular RCSA with detailed risks can add value by enabling firms to provide management with robust reports that encourage better risk management. However, this process presents various challenges, exacerbated by the fact that firms tend to report causes and not risks, leading to an over reporting of "risks" in the RCSA. These challenges could prevent firms from using the RCSA as an effective risk management tool.

RCSA - Number of risks reported by BIPRU and IFPRU



RCSA - Number of risks reported by prudential category



ORIC International insights

Firms are now focusing less on the aspects for implementing/completing risk management framework projects and more on the embedding of operational risk management and measurement. This is changing the perception of exercises such as the RCSA process from a compliance exercise to a tool that can leverage and inform strategic business decisions.

How the firms report these risks in terms of scope, coverage, granularity and aggregation of multiple data sources is a challenge. The ability of firms to link KRIs to their RAS is a continued area of development.

Other individual risk management frameworks

KPMG's survey highlights that:

- 30% of this year's respondents have developed individual risk management frameworks for risks beyond operational and liquidity risk, including:

  1) Investment risk
  2) Market risk
  3) Counterparty risk

KPMG's risk journey

The objective of a robust and effective Risk Management Framework is to ensure that a firm can manage its risks in accordance with the risk appetite determined by the board, in order to achieve its corporate objectives. We see this as a "Risk Journey" with the key stages and milestones set out below:

- Establish firm strategy
- Clearly articulate in strategy document

Firm strategy

- Develop risk appetite in line with firm strategy
- Articulate in Risk Appetite Strategy (RAS)

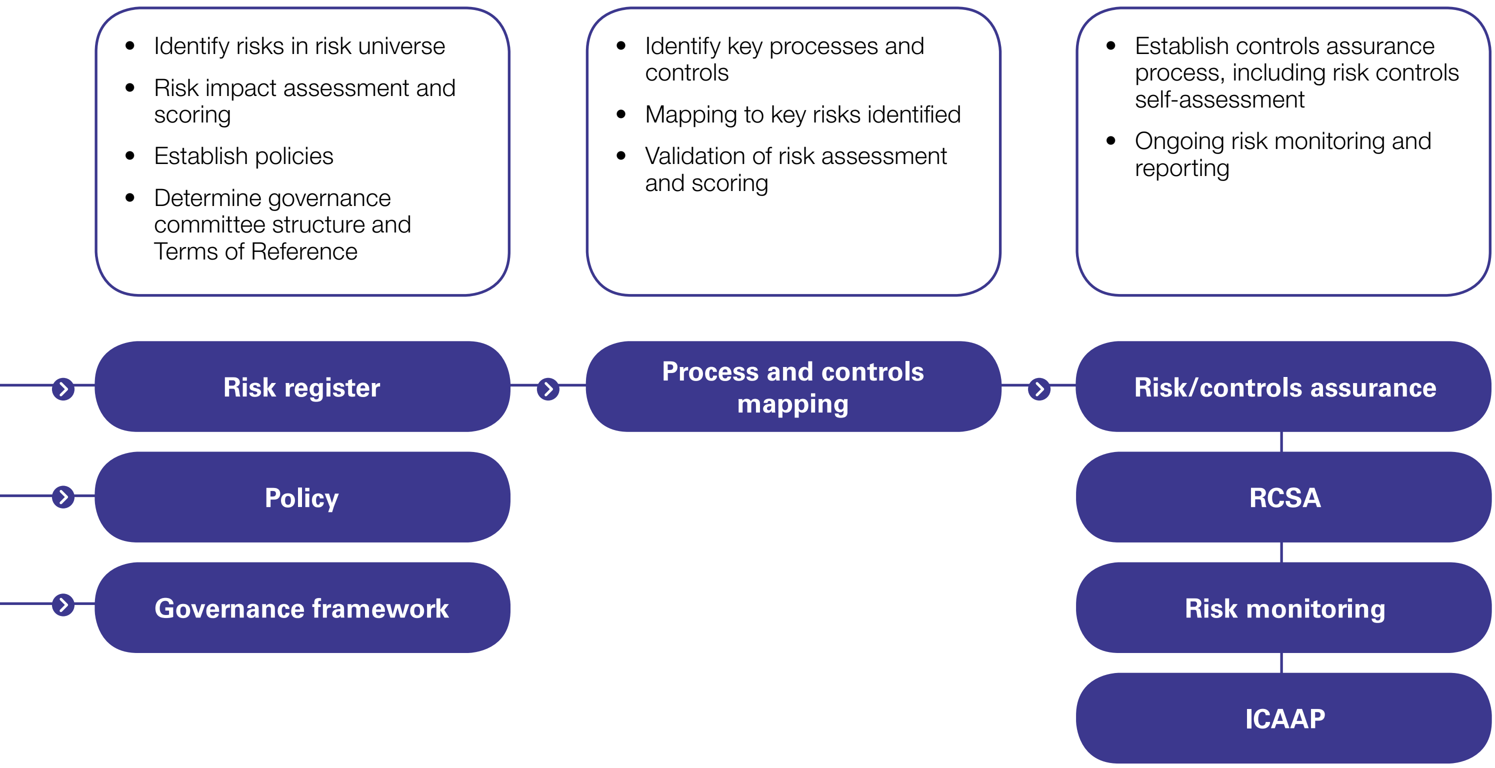
Risk appetite

- Establish "three lines of defence"
- Define roles and responsibilities
- Determine risk universe and risk categories
- Develop framework policy document

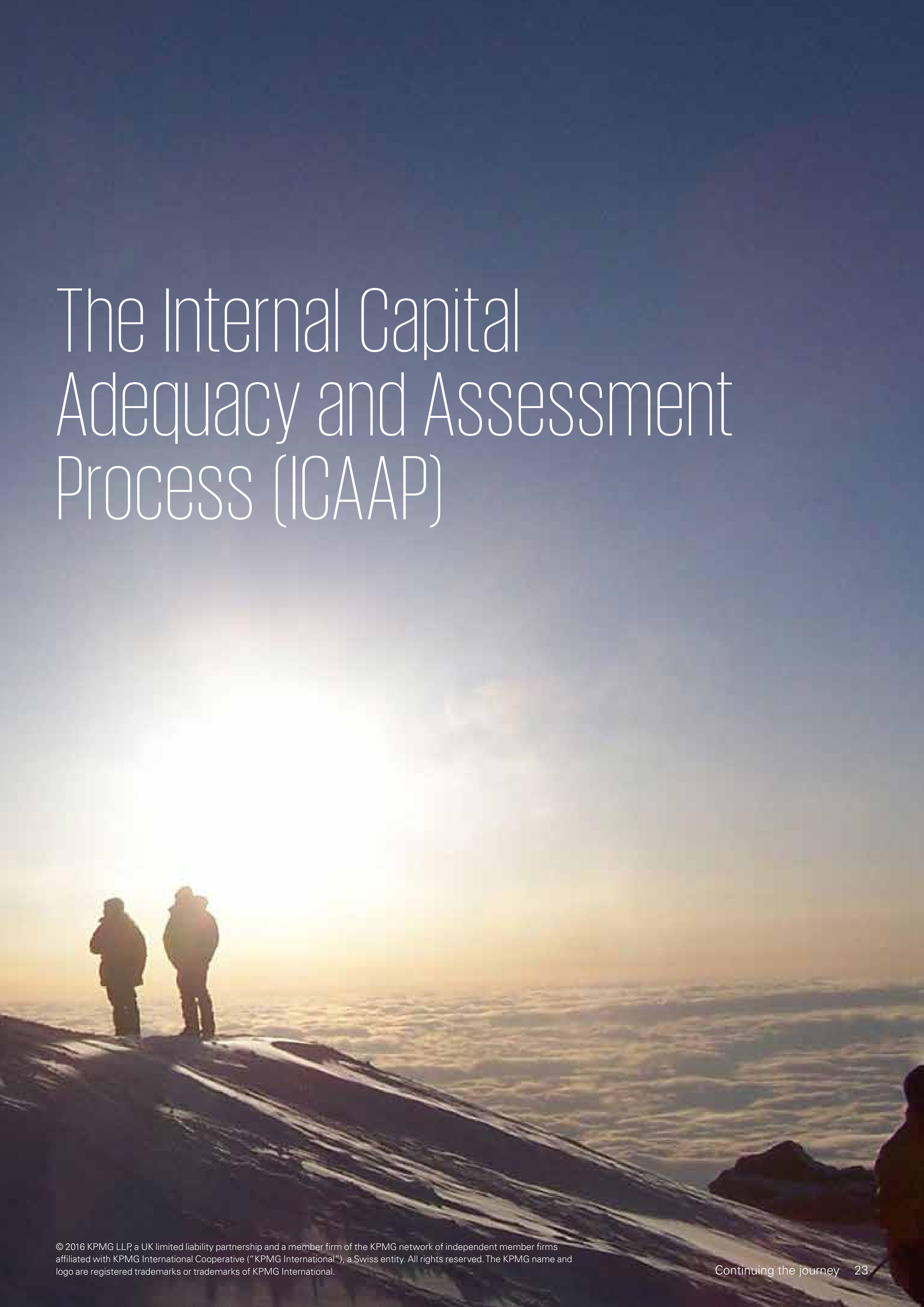
Risk Management Framework

Risk Stage

Example activities


• Identify risks in risk universe
• Risk impact assessment and scoring
• Establish policies
• Determine governance committee structure and Terms of Reference
• Identify key processes and controls
• Mapping to key risks identified
• Validation of risk assessment and scoring
• Establish controls assurance process, including risk controls self-assessment
• Ongoing risk monitoring and reporting
Risk register
Policy
Governance framework
Process and controls mapping
Risk/controls assurance
RCSA
Risk monitoring
ICAAP

The Internal Capital Adequacy and Assessment Process (ICAAP)



ICAAP

An Internal Capital Adequacy Assessment Process (ICAAP) is a process by which a firm determines the appropriate quantity and quality of regulatory capital it is required to hold. This approach is captured within the ICAAP document.

The overall capital requirement

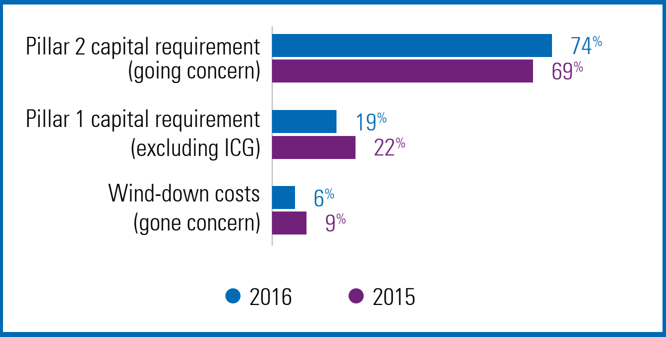
- **Pillar 1 represents the minimum capital requirement and is greater than either the base capital requirement, the fixed overhead requirement or the sum of credit and market risk for limited licence firms.**
- **Pillar 2 supplements Pillar 1 and assesses the capital requirement for key risks not considered or adequately captured by Pillar 1.**
- **Finally, firms should assess their "gone concern" capital and document this in a wind-down plan to ensure they have sufficient capital to achieve an orderly wind-down.**

The appropriate level of regulatory capital is the higher of a firm's going concern capital and gone concern capital.

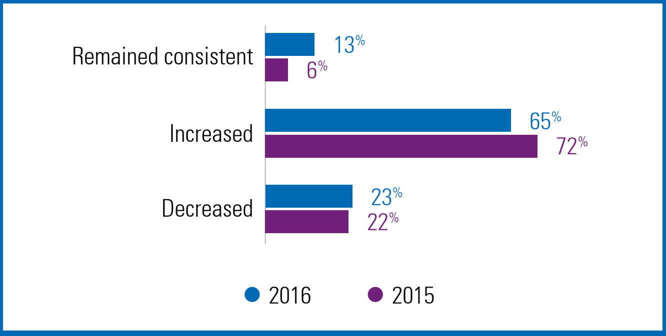
KPMG's survey outlines that:

- 94% of the respondents describe the process to identify key risks to the firm in the ICAAP and/or supporting documentation
- For the vast majority of firms (94%) the capital requirement is driven by Pillar 1 or Pillar 2 (i.e. going concern)
- Compared with last year, the majority of firms continue to see an increase in capital requirements.

Firms' overall capital requirements are driven by



Have your capital requirements increased, decreased or remained consistent since your previous ICAAP?



Operational risk (OR) is defined as risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. This definition includes legal risk, which is the risk of loss resulting from failure to comply with laws and contractual obligations, as well as prudent ethical standards in addition to exposure to litigation from all aspects of the business' activities.

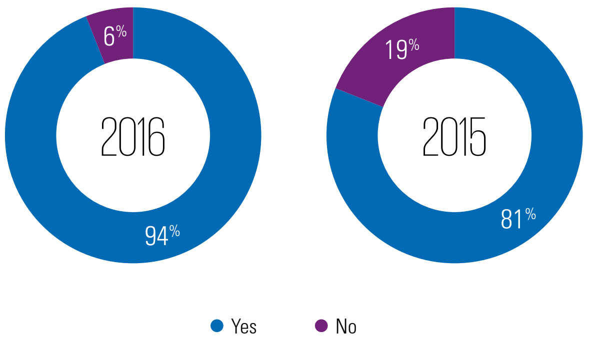
The FSA guidance on operational risk management framework describes scenario analysis as being a process where expert judgment is used to ascertain different risks to which the business might be exposed. Scenario analysis seeks to quantify the "unexpected" or potentially catastrophic losses and "tail risks" to which a firm may be exposed.

ORIC International insights

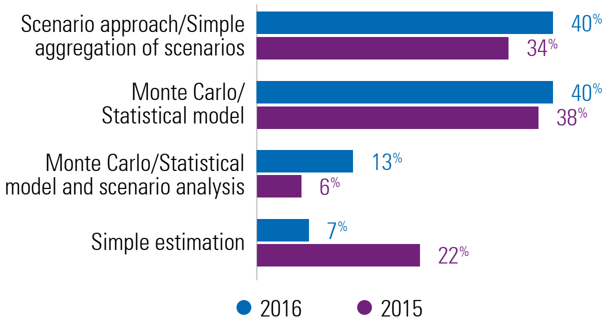
How many scenarios should a firm consider in workshops? This is an area where there is a high degree of divergence and there is no right answer. This is highly subjective and depends on factors such as the size and complexity of the business model, how embedded the process is, and the granularity of the scenarios being run e.g. business unit or group level.

Compared to 2015, firms are taking a more sophisticated approach to assess their capital requirements for operational risk. We observe that 94% of the participant firms use scenario analysis to assess operational risk under Pillar 2 compared to 81% in 2015. An increasing number of firms are moving from a simple estimation approach and adopting statistical modelling techniques.

Do you take a scenario analysis approach under Pillar 2 to calculate your operational risk capital requirement?



Approach to assess operational risk capital under Pillar 2 - 2015/2016



Approach to assess operational risk capital under Pillar 2 - prudential category

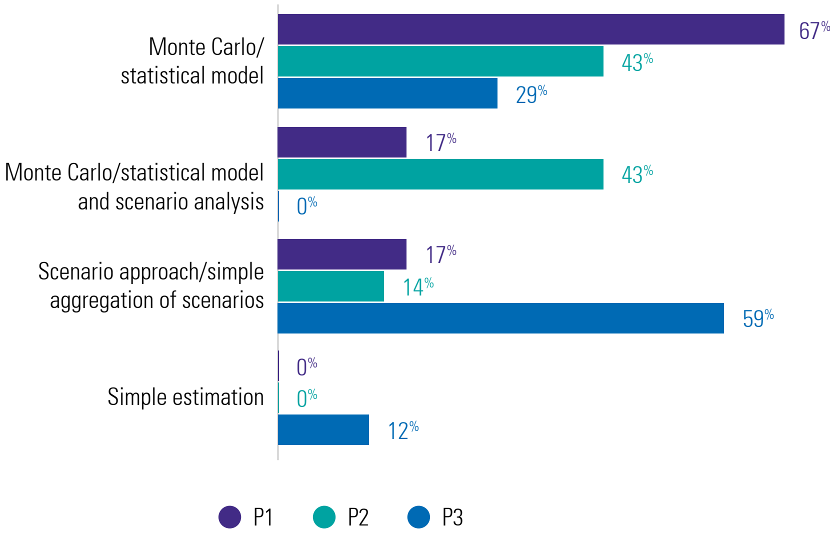
When firms adopt a model to undertake scenario analysis, it is important that management understand the underlying process so they can evaluate whether the level of capital required is appropriate:

1. Management need to understand both the inputs and outputs of the model so they are able to provide valuable data points.

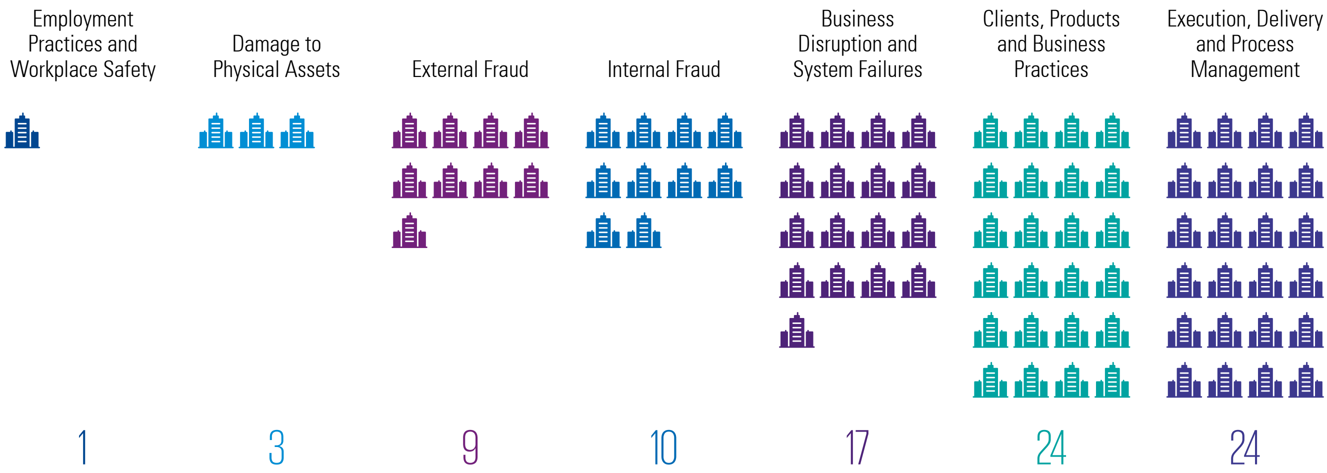
2. Management need to understand the sensitivity of the model in order to adequately challenge its inputs.

The more management understand, the more they are able to provide relevant specialist knowledge and challenge.

KPMG's Benchmarking Survey highlights that the majority of respondents make reference to the Basel operational risk categories (72%) within their capital assessment processes.



Basel operational risk categories captured by firms in the ICAAP



Operational risk scenarios analyses

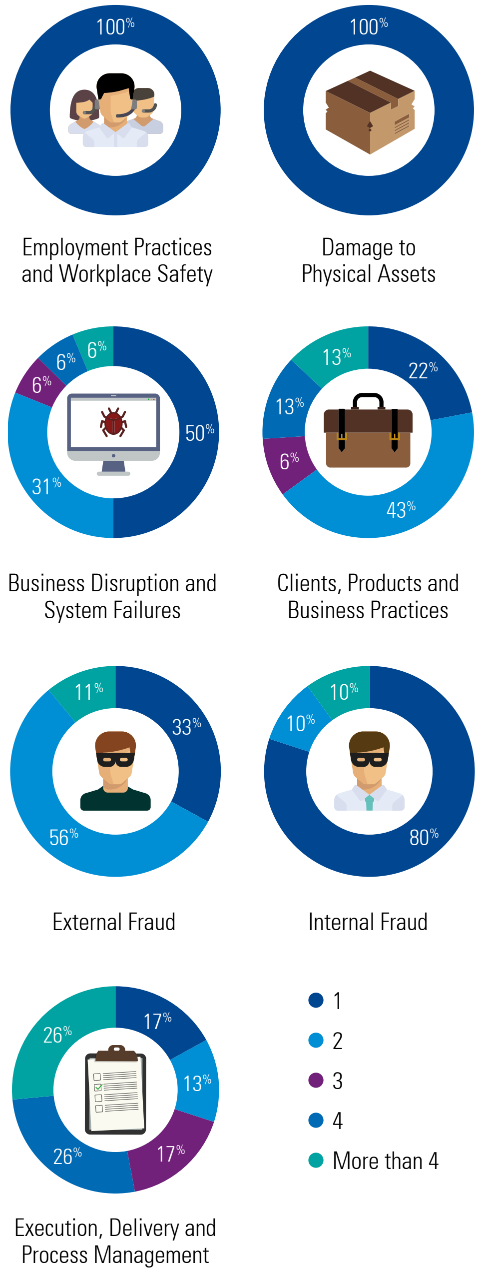
While 24 firms capture execution, delivery and process management risk under Pillar 2, only one firm captures employment practices and workplace safety risk.

The chart shows that despite the regulator's focus on security of internal and external access to systems and data, relatively few entities capture external fraud such as cyber risk.

This year, more than half of the respondents are developing four or more scenarios for Execution, Delivery and Process Management risk and 26% have four or more scenarios for Clients, Products and Business Practices.

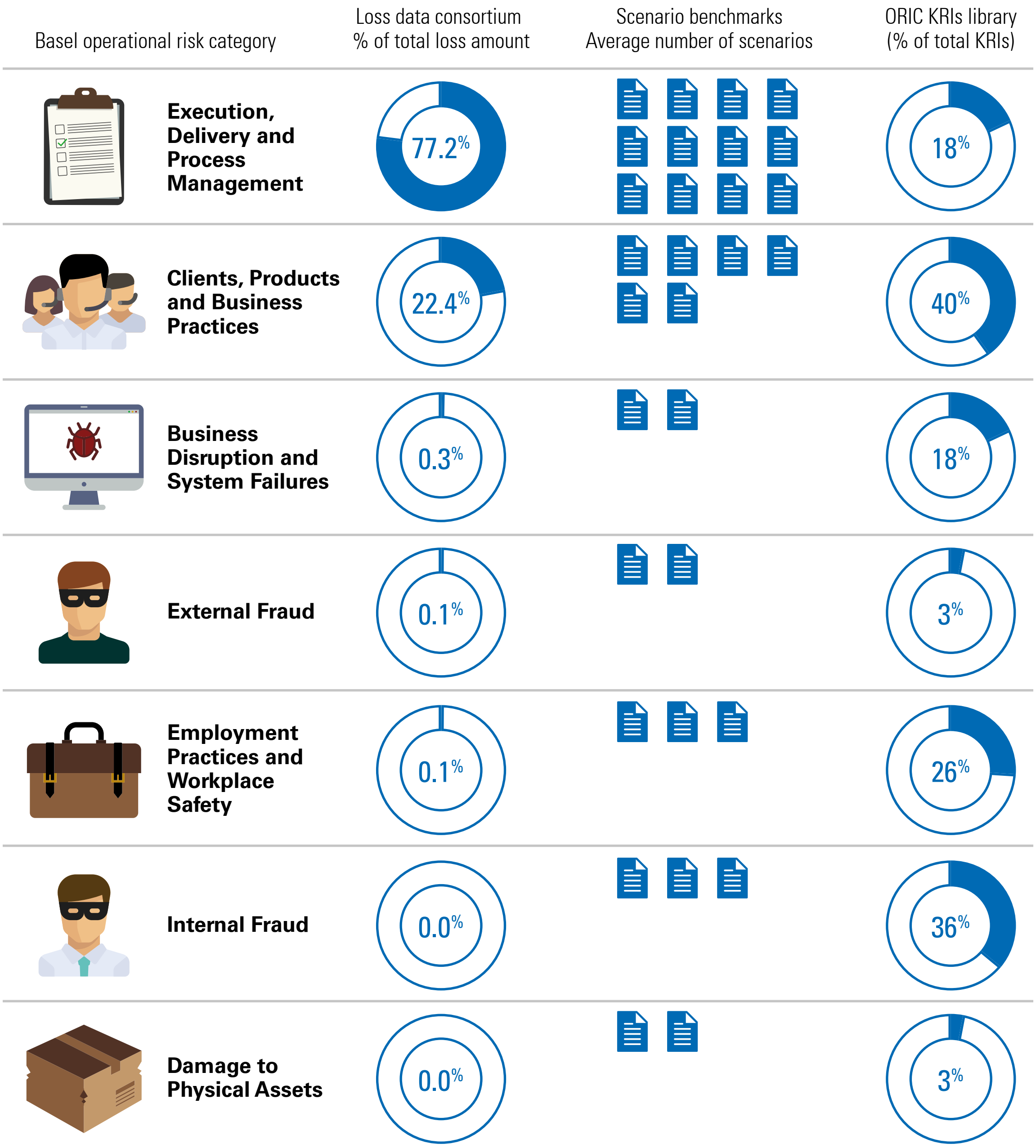
In 2015, our observations also highlighted that these two categories are the most common risk categories for scenario analysis. On average, firms developed:

- 4.7 scenarios for Execution, Delivery and Process Management.
- 3.3 scenarios for Clients, Products and Business Practices.



ORIC International insights

The KPMG survey highlights are consistent with the investment firm specific findings within ORIC International's various benchmark and information services, including member-reported loss experience. Execution Delivery and Process Management has the most investment firm losses recorded in the ORIC International risk event database with a combined gross loss amount of £156 million which represents 77% of the total gross amount of all investment firm loss events.

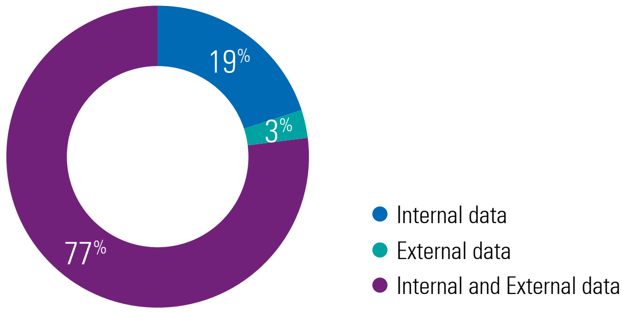


The number of KRIs developed per key operational risk category reinforces our earlier findings that firms have not adequately aligned their risk management components (i.e. key risks – KRIs).

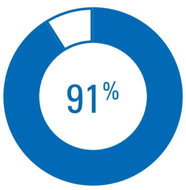
Although scenario analysis is the most commonly used tool to assess operational risk; reliable, complete and relevant inputs are necessary to ensure that the risks are properly captured.

Use of internal and external data

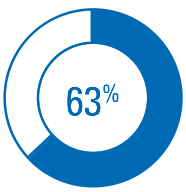
77% of the respondents use both internal and external data, an increase compared to 69% last year.



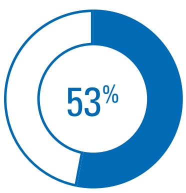
Source of internal data



Risk event leading to a loss



Risk event leading to a gain



Near-miss event (positive and negative)

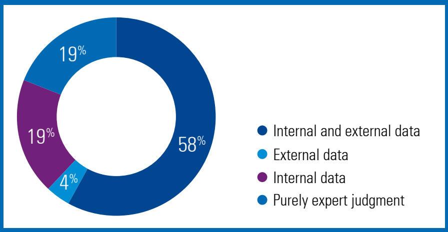
However, the source of internal data varies considerably. Risk events and near-miss events should be considered as indicators of a firm's potential vulnerabilities. An event may indicate failures and errors in processes regardless of the size of the impact and their consideration as inputs for scenario analysis could therefore be useful.

Typically, firms use the following sources to access external data:

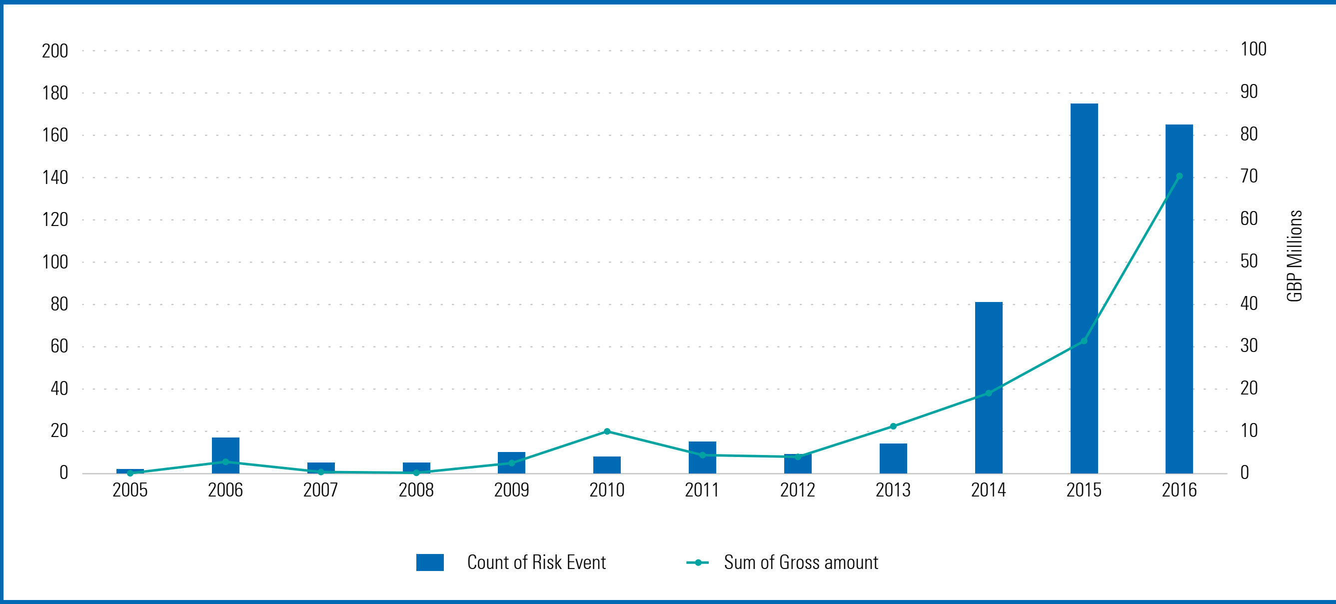
1. FCA website 2. Internet search 3. Consortium data.

ORIC International insights

The KPMG survey highlights are consistent with the investment firm specific findings within ORIC International's various benchmark and information services. The data inputs that firms choose to make use of are varied and dependent on multiple factors, such as the maturity of the process, and the internal perception of the value of the process. A recent ORIC International study showed that 62% of firms are using external data as an input into their scenario analysis process.



ORIC International investment management loss data



Operational risk – mitigation techniques

While the FCA recognises the impact of insurance benefit for operational risk capital assessments, its use is subject to limits and requirements:

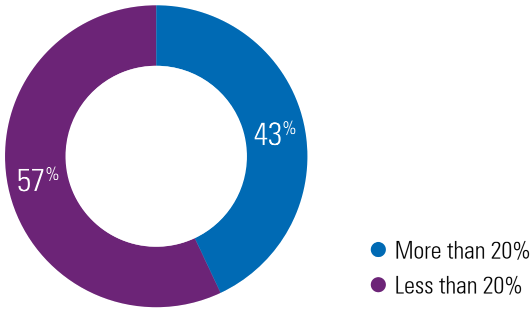
1) Within the ICAAP document, firms should articulate how insurance can be relied upon.

2) The recognition of insurance is currently limited to 20% of the total operational risk capital charge calculated for AMA banks, but this is commonly understood to be the limit being applied by the FCA to investment firms.

3) The CRR (Article 323) describes the eligibility requirements for the recognition of insurance mitigation.

38% of this year's respondents make use of insurance mitigation when assessing their capital requirement for operational risk, a decrease compared to the result of our 2015 Survey (48%).

Insurance benefit



Diversification benefit

Diversification benefit captures the idea that it is unlikely that all operational risk scenarios will occur at the same time.

As with insurance, it is recognised by regulators but also subject to limits and requirements. For example, it is commonly understood that a diversification benefit above 40% is likely to be challenged by the FCA.

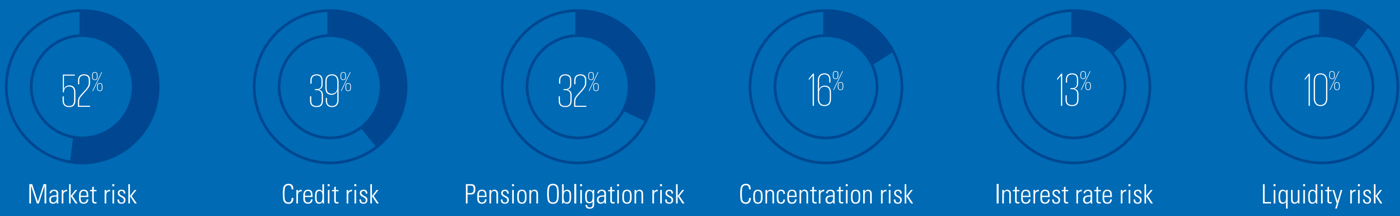
Similar to our 2015 survey, 35% of this year's respondents make use of diversification benefit when assessing their capital requirement for operational risk. For all such firms, the impact of diversification benefit on the overall capital requirement for operational risk under Pillar 2 is below 40%.

While insurance mitigation and diversification benefit can be used to significantly decrease the operational risk capital requirement, the quality and adequacy of the inputs are of critical importance to ensure firms do not underestimate their capital requirement.

Only 19% of this year's participants make use of both insurance and diversification benefits compared to 25% in 2015.

Pillar2A - other risks

Firms hold additional capital for:



52% of firms hold additional capital for market risk under Pillar 2, amongst which 63% use the VaR approach. However only 88% of these firms capture this risk in their RAS

39% of firms hold additional capital for credit risk under Pillar 2 amongst which 58% use Internal Rating Based (IRB) models. However only 75% of these firms capture this risk in their RAS

32% of firms hold additional capital for pension obligation risk under Pillar 2 but only 70% of these firms capture the risk in their RAS

16% of firms hold additional capital for concentration risk under Pillar 2 but only 80% of these firms capture the risk in their RAS

13% of firms hold additional capital for interest rate risk under Pillar 2 but only 75% of these firms capture the risk in their RAS

10% of firms hold additional capital for liquidity risk under Pillar 2 but only 67% of these firms capture the risk in their RAS

These observations reinforce our finding highlighted earlier in this report that firms appear to have not aligned the different components of risk management (i.e. RAS to key risks to KRIs).

Stress testing

Capital held for stress tests, or Pillar 2B, should be used to absorb any additional losses that occur in adverse circumstances outside of a firm’s direct control.

Regulatory stress testing enables firms to test the adequacy of their capital during periods of stress and, where necessary, implement any additional capital buffers.

In carrying out stress tests, firms must identify an appropriate range of adverse circumstances of varying nature, severity and duration and consider the exposure of the firm to those circumstances. This includes:

a) circumstances and events occurring over a protracted period of time;

b) sudden and severe events, such as market shocks or other similar events; and

c) some combination of the circumstances and events described in (a) and (b), which may include a sudden and severe market event followed by a firm-specific event.

All stress tests should be appropriate to a firm’s nature, scale, and complexity.

Our 2015 survey highlighted that, on average, firms were developing four single event stress tests and two combined stress tests.

This year’s results show that 48% of the respondents capture the three dimensions described here above, namely:

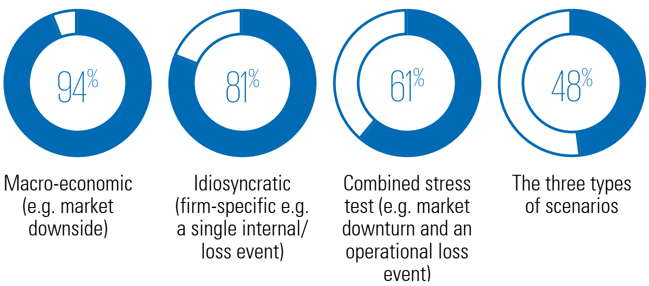
- Macro-economic stress test (e.g. market downturn); and
- Idiosyncratic (firm-specific e.g. a single internal/ loss event); and
- Combined stress test (e.g. market downturn and an operational loss event).

Under Pillar 2A, firms are required to stress test individual risks on a standalone basis (e.g. operational risks). In a firm-wide stress test, these individual components are then stressed collectively to assess how the firm would fare in severe adverse conditions.

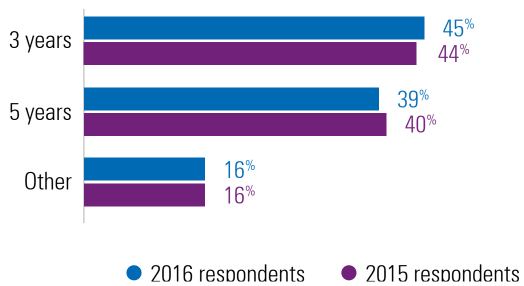
KPMG’s Benchmarking Survey highlights that 26% of this year’s respondents do not capture each of the key risks of the firm in the stress test scenario.

Compared to Pillar 2A, stress test analysis should capture the impact of scenarios over a projected time period. This year’s survey highlights a consistent approach compared to previous years.

Types of stress tests developed



Period covered by the stress test analysis

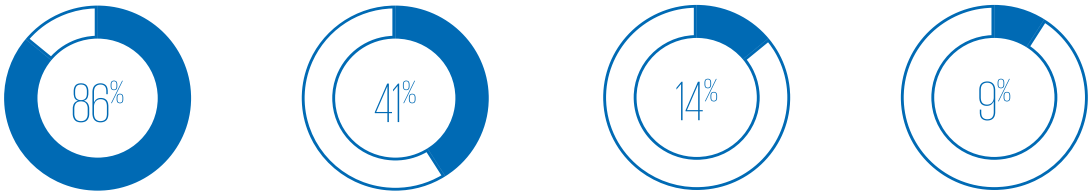


The assessment should include a quantification of the effects of the scenario over the entire period. Where a scenario covers a longer period than one year, the selection and development of management actions becomes more important whether or not the firm captures their benefit when assessing stress tests impacts.

While it is important to identify what events could cause the business to fail, it is just as important to highlight what the firm can do to prevent these events from happening or to recover from them.

However, KPMG's survey highlights that 31% of the firms don't include management actions in their stress tests. The charts below shows how firms are approaching management actions:

Does the firm include management actions in its stress tests?



The firm describes the approach by which the management action will be taken

The firm identifies when the management action will be taken

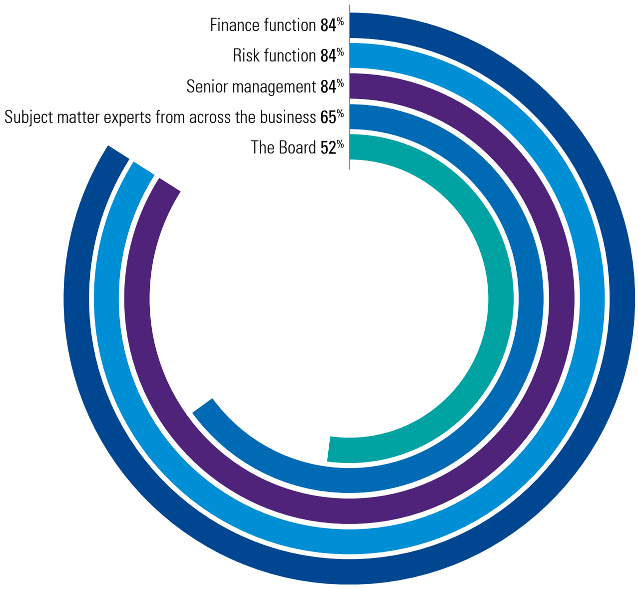
The firm identifies a responsible individual for each management action

The firm takes all three approaches

Our 2016 study also shows that 86% of the firms who consider management actions in their stress testing analysis take into account the financial benefit from these management actions.

The graph below shows the degree to which different functions are involved in the selection, development and implementation of stress tests.

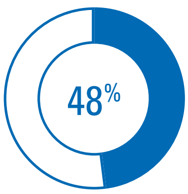
Involvement in the selection, development and implementation of stress tests



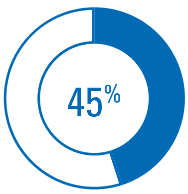
Are stress testing outcomes used by the business and integrated into firm decision-making processes?

The ICAAP should be embedded within the business and as a result, firms should integrate stress testing outcomes into their decision-making processes.

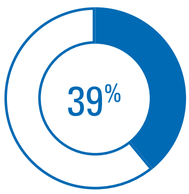
Our survey highlights that for 45% of firms, stress testing outcomes are considered as part of strategic decisions. However, this is not the case for 39% of firms who may see challenges by the regulator.



Inform the operational decision-making process



Inform the strategy decision-making process

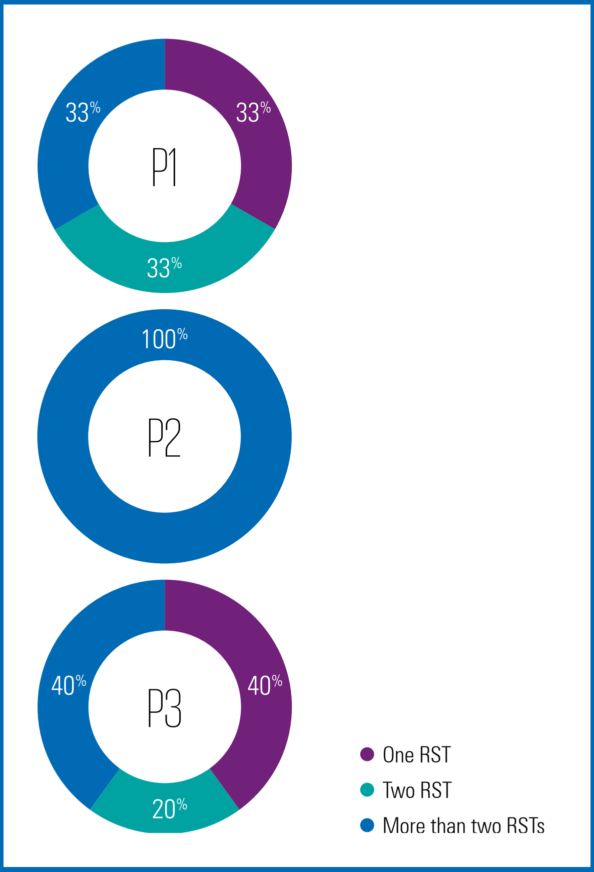


Stress test outcomes do not inform decision-making process

Breaking the firm – reverse stress test

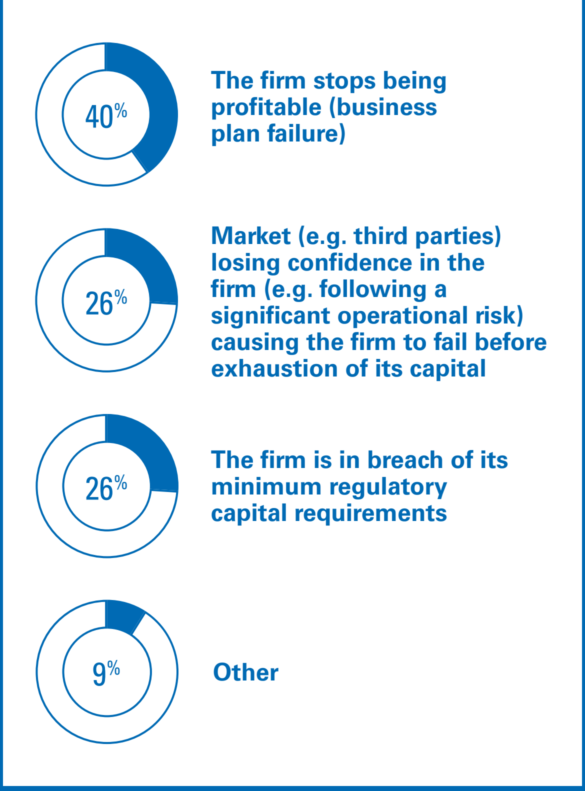
The reverse stress test is used as a management tool to 'break' the business and, in this process, exposes firms to any additional risks and vulnerabilities that they might face. Reverse stress tests start from a stressed position and then work backwards to assess potential scenarios that could lead to that outcome. Perhaps surprisingly, our survey indicates in the graph below that our more prudentially systemic P1 firms carry out fewer reverse stress tests than their P2 and P3 counterparts.

Number of RSTs developed by prudential category



The below graphs show the outcomes of the RST developed by firms:

What is the outcome of the RST?



Gone concern – The orderly wind-down

Firms are expected to assess the amount of capital they would require to perform an orderly wind-down of business operations and return assets to clients.

Investment firms also need to ensure they have considered any potential trigger events that could lead to a wind-down. Any triggers must be credible and based on reliable management information such as internal loss data or previous scenarios selected. For this reason many firms use the Reverse Stress Test event as a trigger to activate the wind-down plan.

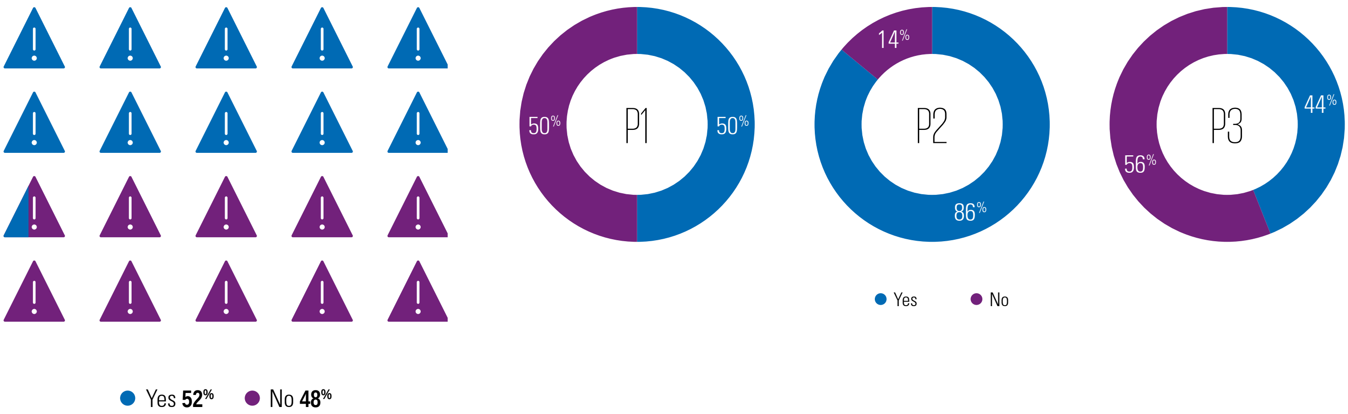
Early warning indicators

A key assumption to ensure that a firm can achieve an orderly wind down is the timing: the Board should decide when to wind down the business.

The decision to wind down a firm can be informed by the use of early warning indicators. These will vary from firm to firm but, where possible, should be both qualitative and quantitative in nature.

KPMG's survey highlights that 55% of this year's respondents have early warning indicators in place. The below graphs provide a view by prudential category:

Are early warning indicators in place to inform the firm of the necessity to wind down the business?



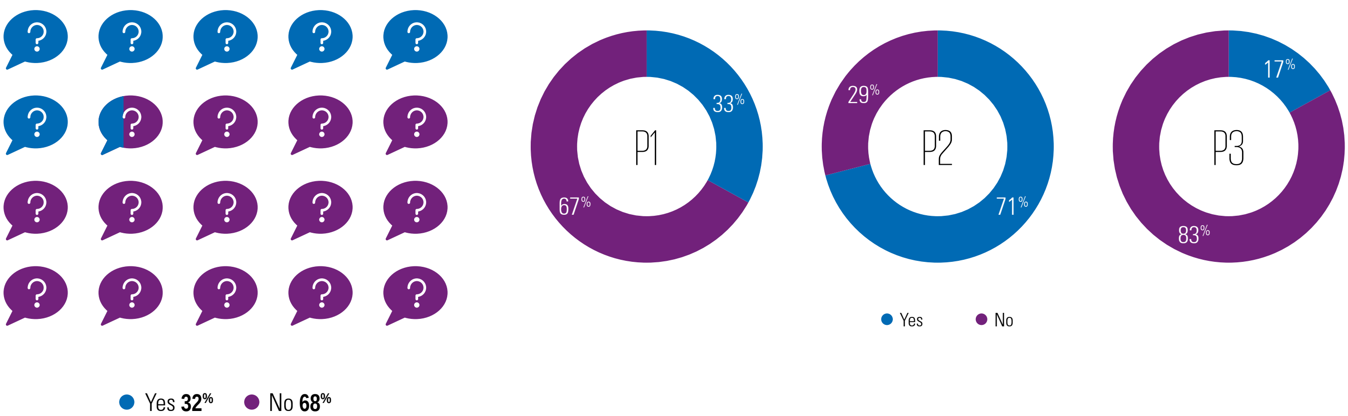
Obstacles to orderly wind-down

Identifying and removing/mitigating any risks or barriers to an orderly wind-down is important to ensure that the process can be activated and implemented with minimal delays or issues.

KPMG's survey highlights that 32% of this year's respondents have considered potential risks to an orderly wind-down. The graph below presents our findings by prudential category:

Does the firm consider the risks to an orderly wind-down i.e. increased risk of operational errors and/or fraud during wind-down?

Does the firm consider risks to an orderly wind-down?

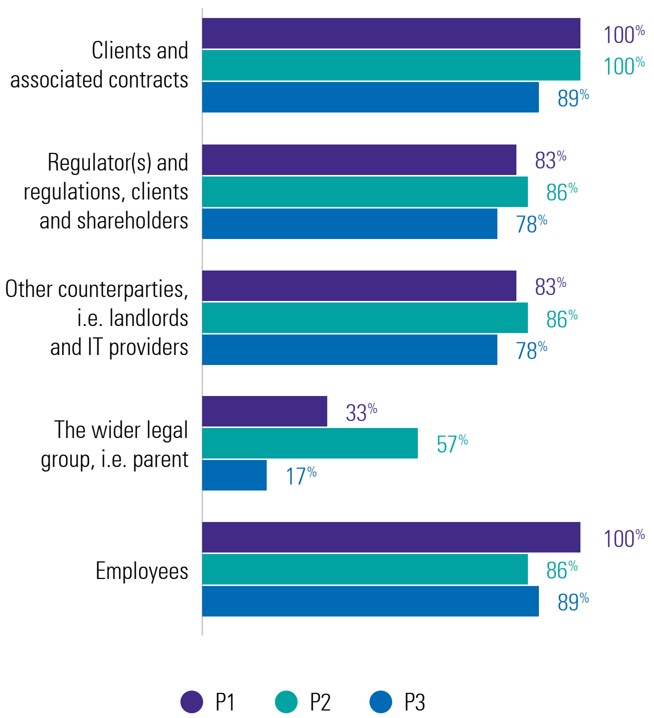


Impact assessment: who will be affected?

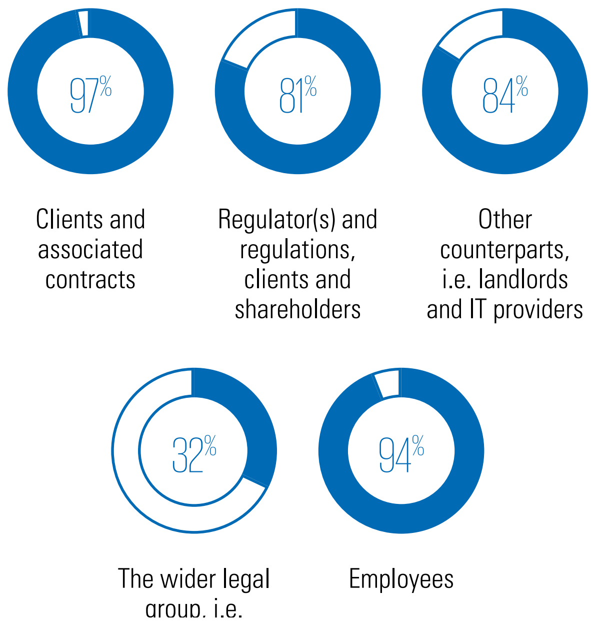
The FCA has three statutory objectives: to protect consumers, to ensure market integrity, and to promote effective competition. As such, the wind-down plan should consider key stakeholders during the process, how they will be affected, and what action should be taken to ensure that they are treated and communicated to in both a fair and timely manner.

KPMG's survey highlights that the majority of this year's respondents have considered key stakeholders in their wind-down plan. The graphs below provide further information:

Does the firm consider the impact on the following stakeholders during a wind-down?



Does the firm consider the impact on the following stakeholders during a wind-down?

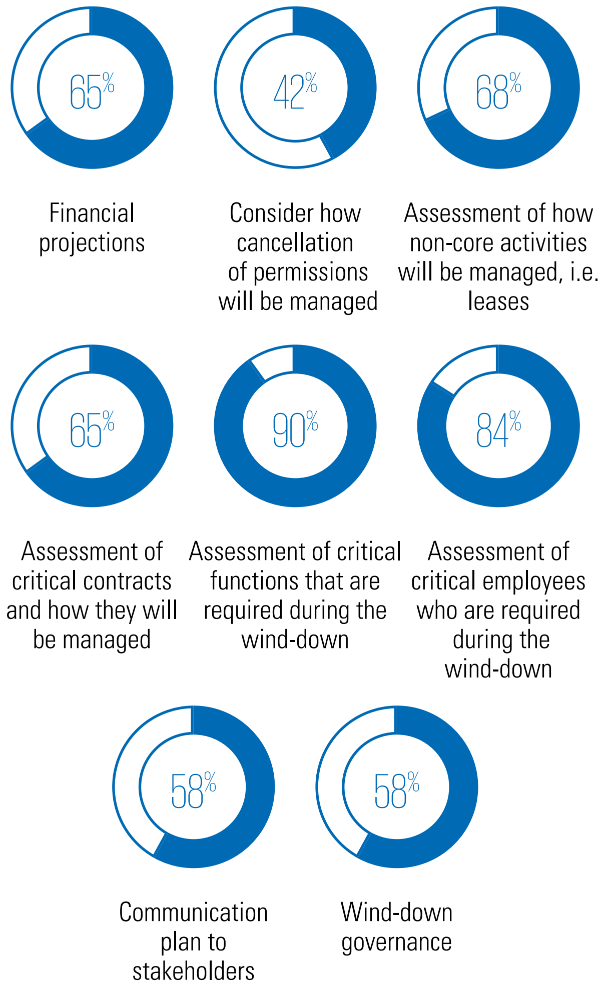


Key activities and assessment for a wind-down

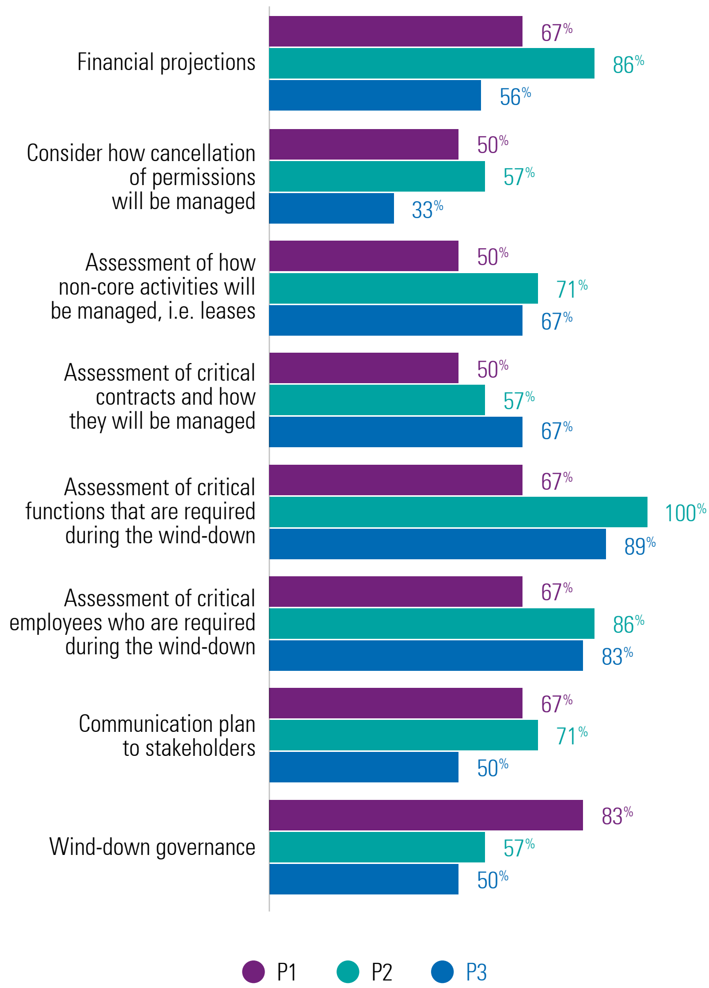
A number of activities/assessments are key to ensure the firm can achieve an orderly wind-down.

This year's study highlights disparities between respondents in relation to key activities/assessment included in the wind-down plan with P2 firms again appearing to take the lead compared to P1 firms in this area.

Does the firm consider the following key activities for a wind-down?



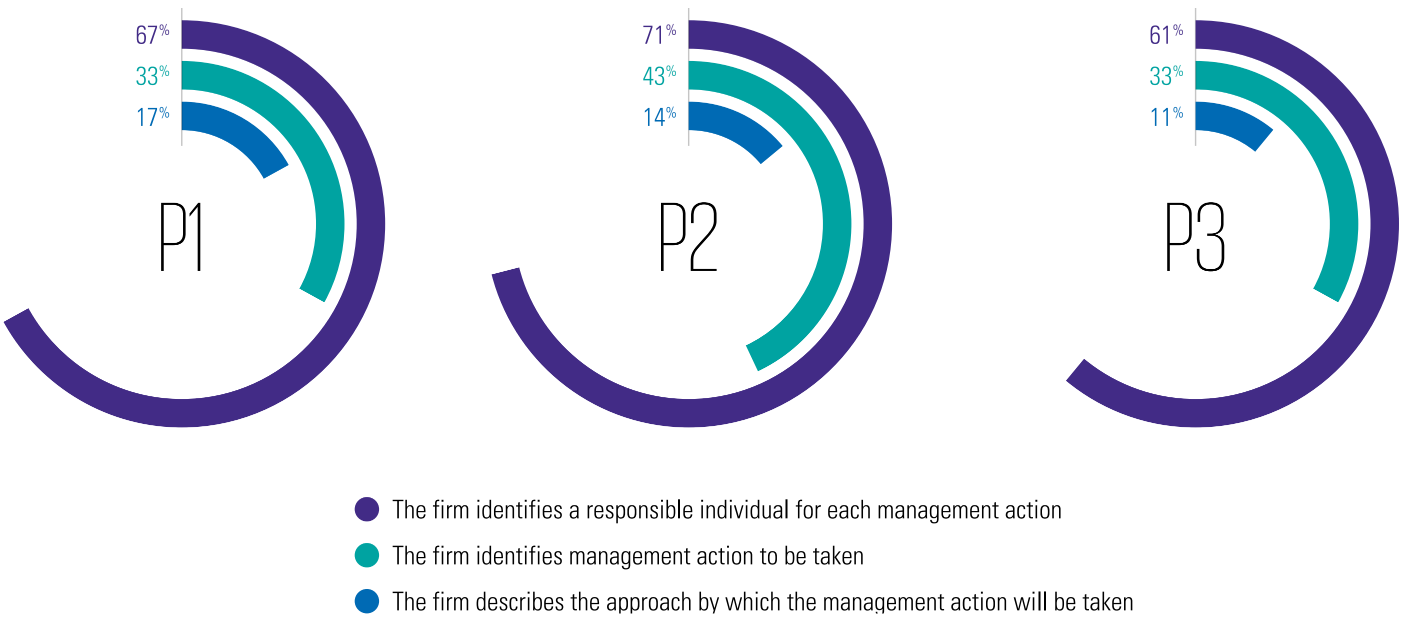
Key activities considered for a wind-down



Management actions

Similarly, there are differences between how wind-down plans consider management actions, but this time there is little difference across prudential categories.

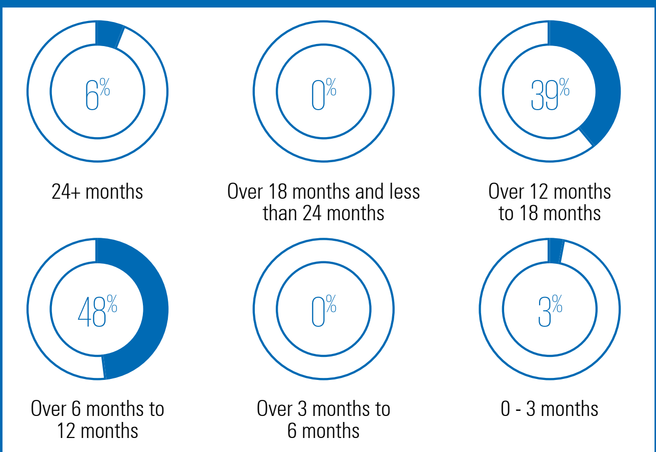
In the wind-down plan, does the firm describe management actions?

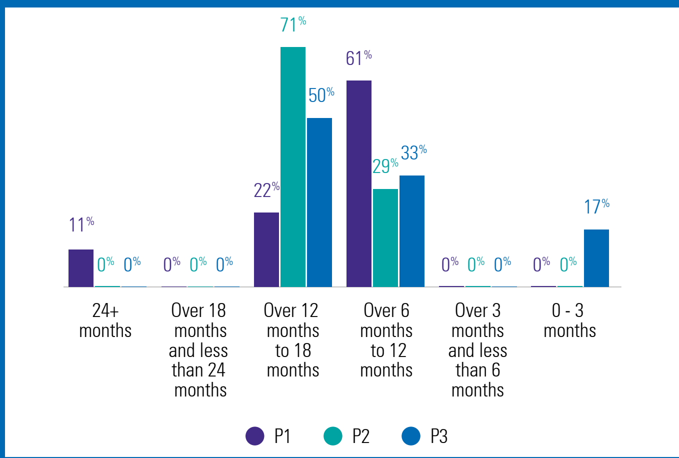


Wind-down period

Another major factor is the wind-down period. Anything less than 12 months is likely to be challenged for complex firms. KPMG's survey highlights that fewer firms are using a wind-down period less than or equal to 12 months compared to last year (51% in 2016 vs 66% in 2015).

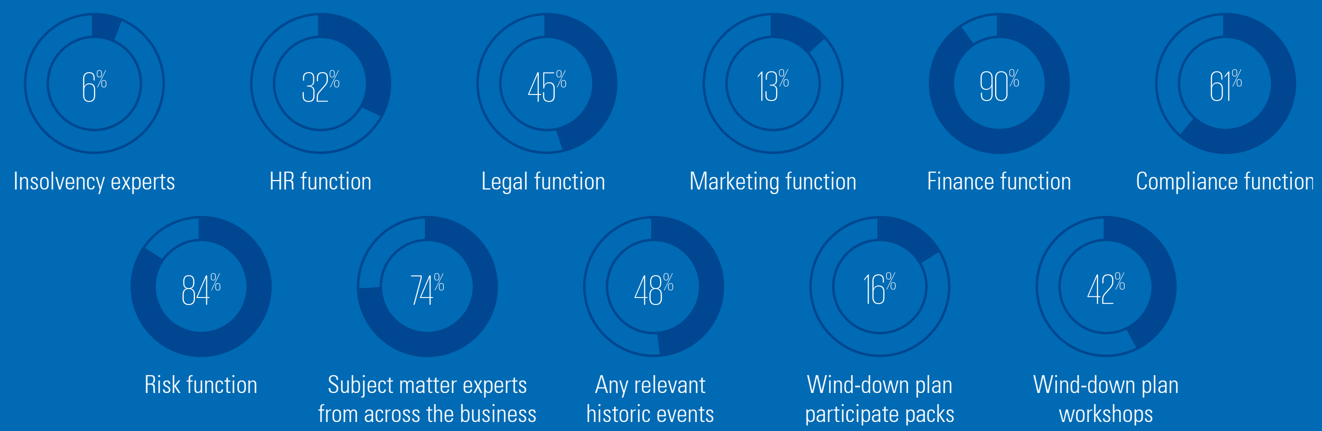
The below graphs give a granular view by prudential category:





Who takes part in the development of the wind-down plan?

The finance function is most commonly involved in the development of the wind-down plan – only 42% of firms use workshops to develop their plans.

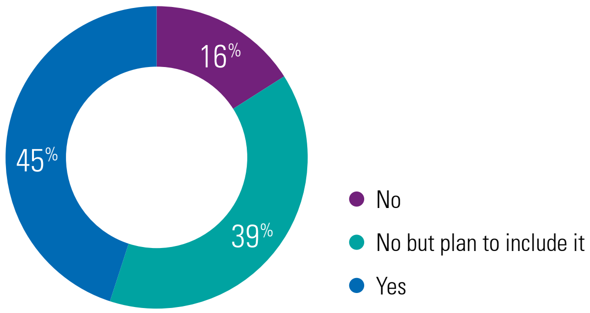


The macroeconomic environment: Brexit

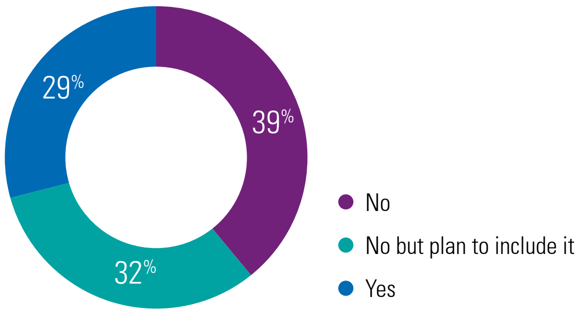
The macroeconomic environment: Brexit

As part of the ICAAP, a firm should describe the environment in which it operates (i.e. key activities and strategy). The 2016 findings show that the majority of respondents include, or plan to include, a description of the potential impacts of Brexit on their business and stress testing analysis in the ICAAP.

Brexit impact



Brexit stress test analysis



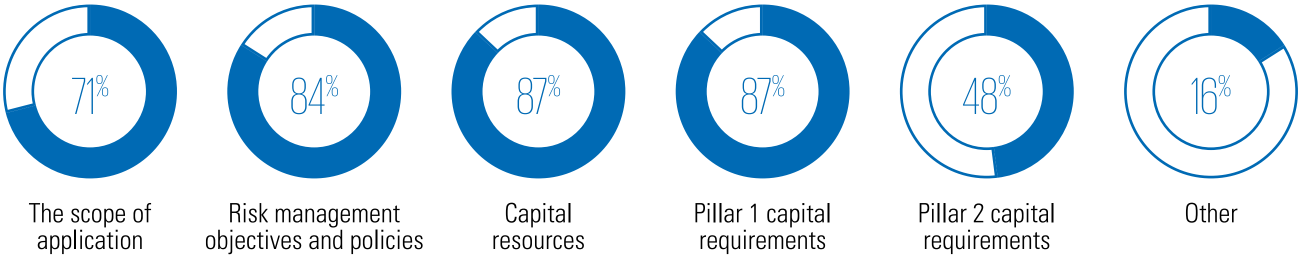
Pillar 3: disclosure

Pillar 3: disclosure

The CRD framework consists of three 'pillars' of regulatory capital. Pillar 1 sets out the minimum capital requirements that firms are required to hold; under Pillar 2 firms are required to assess whether additional capital should be held against risks not adequately covered in Pillar 1; and Pillar 3 should improve transparency and market discipline by requiring firms to publish details of their risks and capital management frameworks.

Pillar 3 is an effective means of informing market participants of a firm's exposure to risks and how this is managed. It also enhances comparability between firms so that interested parties can differentiate between firms that manage their risks prudently and those that do not. KPMG's survey outlines that the information disclosed by market participants is still not harmonised.

Pillar 3 - disclosed information



Appendix - How can KPMG help?

Case studies illustrating different areas of support provided by our Risk and Capital team.

ICAAP health check

Client type:
Listed UK investment manager

Client issues:
The firm was due to submit their ICAAP document to the FCA after undergoing a series of internal changes. The client was seeking an external third party to review the ICAAP document submission to the FCA in order to identify potential areas of challenge and improvement.

Benefit of KPMG assistance:
KPMG carried out a desktop review of the ICAAP document and other supporting documentation to gain an understanding of the firm's overall risk management processes. This allowed us to identify areas that could be easily improved prior to the ICAAP submission, as well as medium to long term areas of improvement. This ensured that the ICAAP process was embedded within the business, meeting regulatory expectations and best practice.

ICAAP development

Client type:
Branch of a global investment manager

Client issues:
As part of an FCA authorisation, the client was seeking an external third party to develop an ICAAP for the entity.

Benefit of KPMG assistance:
KPMG held a number of meetings with the business to understand its business and risk profile and subsequently assisted the firm in developing the ICAAP document to ensure regulatory compliance.

Risk Management Framework and ICAAP support

Client type:
Global investment manager

Client issues:
Following a SREP by the FCA, the firm was issued with a Risk Management Plan (RMP), Internal Capital Guidance (ICG) and scalar.

Benefit of KPMG assistance:
KPMG held a number of workshops with the business to understand its operations and subsequently assisted with the development of the risk management framework and ICAAP document, ensuring regulatory compliance. This included, but was not limited to the following areas of support: operational risk scenarios; stress tests; risk taxonomy; wind-down plan; risk identification process; RCSA process; KRIs; COREP; liquidity Risk Management Framework and Contingency Funding Plan.

Risk Appetite Statement (RAS) and Risk Management Framework (RMF) support

Client type:
UK-based investment manager

Client issues:
The firm was seeking assistance from a third party to identify gaps and areas of improvement in relation to its Risk Appetite Statement and Risk Management Framework document, process and approach.

Benefit of KPMG assistance:
KPMG supported the firm in developing a RAS that clearly articulated the level of risk the firm is willing to take to achieve its objectives, given the environment in which it operates.
The RAS is aligned to the firm's strategy and contains both qualitative statements and quantitative measures.
KPMG also supported the firm in developing a robust enterprise-wide framework to effectively identify, assess and manage risk that is consistent with the firm's RAS.

SREP preparation

Client type:
Large investment manager

Client issues:
The firm had to submit its Internal Capital and Adequacy Assessment Process (ICAAP) document to the FCA, and as a result believed that it might be subject to a Supervisory Review and Evaluation Process (SREP) visit. In preparation for this regulatory visit, the firm was seeking assistance from a third party to provide interview preparation for its Board (Executive and Non-Executive Directors) and selected members of the senior management team.

Benefit of KPMG assistance:
This SREP preparation was beneficial in two ways:

- It prepared the executive, non-executive and certain senior management individuals for the regulatory visits through challenging mock interviews, which tested their knowledge and understanding of the firm's risk management processes and documents; and
- It highlighted inconsistencies and areas of improvement in the firm's overall risk management processes, including the ICAAP.

Operational risk modelling

Client type:
Large investment manager

Client issues:
The firm was in the process of implementing in-house methodology for assessing operational risk capital requirement. As such, the firm was seeking assistance from an external third party to select the adequate approach and methodology, given its size and complexity.

Benefit of KPMG assistance:
KPMG delivered technical training to the firm on statistical modelling (frequency/severity model). The understanding of the model enabled the firm to adopt the most suitable approach, given its size and complexity.

Pillar 1 calculations

Client type:
UK-based alternative investment manager

Client issues:
As part of an FCA authorisation, the firm required assistance with its approach to calculating Pillar 1.

Benefit of KPMG assistance:
KPMG assisted this firm to ensure that it was FCA-compliant producing a report which outlines the process and approach to calculating Pillar 1 to ensure that the firm remained compliant with the CRR regulations and did not break its regulatory capital requirement.

About ORIC International

ORIC International is the world's leading provider of operational risk data, benchmarking and content solutions to its global membership base of leading insurance, reinsurance and asset management firms. As members of ORIC International, firms are better able to identify, assess, manage, measure, monitor and report on operational risk.

ORIC International is a not-for-profit organisation that facilitates the anonymised and confidential exchange of operational risk intelligence between member firms, providing a diverse, high quality pool of quantitative and qualitative information on relevant operational risk exposures.

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As the industry thought-leader, ORIC International provides benchmarks, best practice insights, and undertakes leading-edge research for operational risk, and provides a forum for members to exchange ideas and experiences.

For more information on how your firm could benefit from the resources ORIC International provides please contact enquiries@ORICInternational.com.

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