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Risk Appetite Frameworks

Insights into evolving global practices

An IACPM/PwC Study

November 2014

INTERNATIONAL ASSOCIATION OF CREDIT PORTFOLIO MANAGERS

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Executive summary

The **RAF** is an overall approach for establishing, communicating, and monitoring all material risks of the firm through organizational roles and responsibilities, risk appetite statements, policies, risk limits, processes, controls, and systems.

In the aftermath of the financial crisis of 2008, and in response to standard-setting guidance from the Financial Stability Board[1] and other regulators, financial institutions have renewed efforts to strengthen the risk appetite framework ("RAF") within their organizations. Both supervisors and financial institutions agree that the RAF is an essential component of an effective risk governance process.

The International Association of Credit Portfolio Managers ("IACPM") and PricewaterhouseCoopers LLP ("PwC") jointly performed a study to understand industry practices and challenges of developing, implementing, and enhancing RAFs. The IACPM/PwC study surveyed 78 financial institutions across the globe, making this the largest published study of RAF practices.

Surveyed institutions have made significant progress in developing and implementing their RAFs, typically at the overall level of the enterprise. Establishing the RAF has led to better risk awareness at all organizational levels and enhanced internal understanding of a firm's risk profile. Many institutions have been motivated to enhance their RAFs to establish better alignment of enterprise-level risk appetite with strategic goals. Institutions continue to pursue this overarching objective with tighter integration of risk appetite into both long-term business planning and day-to-day management decision making. Notwithstanding the progress that has been made, many institutions also acknowledged their RAFs have not yet adequately developed at the lower levels of the organization where day-to-day decision making ultimately affects the overall risk profile of the firm.

Other key observations from the study include:

- ***RAFs strengthen risk governance by integrating and leveraging separate risk management elements in a holistic manner***
- ***RAFs create a unifying platform to facilitate a common understanding of different risk types across the organization***
- ***Industry practices are markedly divergent with respect to operationalizing different elements of the RAF and linking it to other governance, management, and business processes.***

1 Financial Stability *Board Principles for an Effective Risk Appetite Framework,* 2013

Survey respondents continue to face many challenges in their continuing efforts to develop and implement their RAFs. The top three challenges facing surveyed institutions include:

- Effectively allocating risk appetite across the organization
- Incorporating risk appetite into decision making
- Articulating risk appetite through metrics and limits.

Most survey respondents viewed RAF implementation as more than a regulatory exercise. While existing supervisory guidance has been helpful to the industry, global institutions among those surveyed indicated they would benefit from more consistency of expectations across different jurisdictions. Survey respondents also seek additional clarity from supervisors with respect to certain aspects of operationalizing the RAF.

Further evolution of industry practices will help institutions fully realize the business benefits from the considerable investments being made in establishing an effective RAF.

1. Introduction

Risk appetite is defined as the aggregate level and types of risk a firm is willing to assume within its risk capacity to achieve its strategic objectives and business plan.

—Financial Stability Board, *Principles for an Effective Risk Appetite Framework*, 2013

Risk capacity is the maximum level of risk the firm can assume before breaching constraints determined by regulatory capital and liquidity needs and its obligations, also from a conduct perspective, to depositors, policyholders, other customers, and shareholders.

—Financial Stability Board, *Principles for an Effective Risk Appetite Framework*, 2013

In response to the 2008 financial crisis, several financial institutions embarked on strengthening the risk appetite framework ("RAF") within their organizations. Both supervisors and financial institutions agree that the RAF is an essential component of an effective risk governance process.

Since 2008, guidance on RAFs has been forthcoming from multiple sources, including the Institute of International Finance ("IIF"), the Senior Supervisors Group ("SSG"), the Financial Stability Board ("FSB"), and the Office of the Comptroller of the Currency ("OCC") in the United States.[2]

The International Association of Credit Portfolio Managers ("IACPM") and its members regularly perform in-depth studies of significant topics of interest to the financial services industry. Based on strong industry interest for additional information on RAFs, IACPM and PricewaterhouseCoopers LLP ("PwC") jointly undertook a study based on a survey of 78 financial institutions, supplemented by interviews with 43 of the respondents. This study was conducted from June to November 2014.

1.1 Objectives and scope of this study

IACPM and PwC undertook this extensive study to understand the practices and challenges of financial institutions as they develop, implement, and enhance RAFs. The objectives of this study included:

- Assessing progress in industry practices since the IIF and FSB published their standard-setting RAF-related papers in 2011 and 2013, respectively;
- Developing a further understanding of the RAF components that survey respondents viewed as most important or challenging to implement; and
- Describing institutions' approaches to operationalizing RAFs, allocating risk appetite, and integrating RAFs with day-to-day business decisions as well as longer-term strategy formulation.

While more detailed information from this study has been provided separately to the surveyed institutions, this abbreviated report outlines key observations from the study, and provides detailed observations and insights in relation to the following selected topics:

- Allocating risk appetite below enterprise level;
- Integrating the RAF with strategy and business planning; and
- Risk appetite statements and metrics.

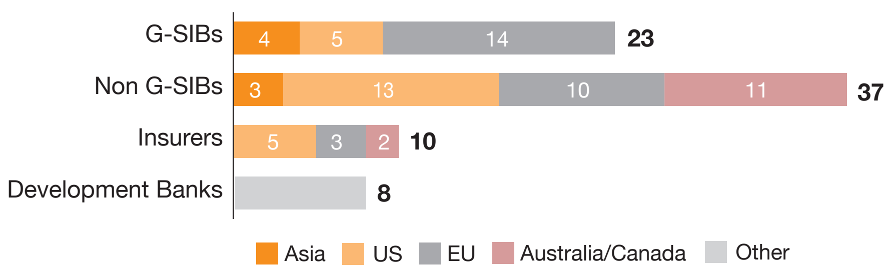
2 Institute of International Finance *Implementing Robust Risk Appetite Frameworks to Strengthen Financial Institutions*, 2011; Senior Supervisors Group *Observations on Developments in Risk Appetite Frameworks and IT Infrastructure*, 2010; Financial Stability Board *Principles for an Effective Risk Appetite Framework,* 2013; OCC *Guidelines establishing Heightened Standards for Certain Large Insured National Banks, Insured Federal Savings Associations, and Insured Federal Branches*, 2014

1.2 Demographics

The study surveyed 78 banks and insurance companies across the globe, making this the largest published study of RAF practices in the financial services industry. Throughout this report, we refer to participants as "surveyed institutions," or "survey respondents." The surveyed institutions were typically represented by individuals who have responsibility for developing and implementing RAFs at the enterprise level within their respective organizations. These individuals responded to a detailed questionnaire and a large number of them also participated in follow-up interviews conducted by PwC.

Figure 1 provides the demographic profile of the 78 surveyed institutions. They include 23 global systematically important banks ("G-SIBs"), 37 non G-SIBs, 10 insurers (four of which are global systematically important insurers or "G-SIIs") and eight supranationals or multi-lateral development banks.

Figure 1 - Demographic profile of surveyed institutions



The information presented in this report is based solely on responses to the survey questionnaire and follow-up interviews with the surveyed institutions. While the IACPM and PwC exercised reasonable care in collecting, processing, analyzing, and reporting the information furnished by surveyed institutions, their responses were not independently verified, validated, or audited to further establish the accuracy and completeness of the information provided.

2. Key observations

Risk profile is defined as a point-in-time assessment of an institution's net exposures (after taking into account mitigants) aggregated within and across each relevant risk category based on forward looking assumptions.

—Financial Stability Board, *Principles for an Effective Risk Appetite Framework*, 2013

For the purpose of this study, **'top-level'** refers to the primary lines of business within an institution (e.g., investment banking and capital markets, wholesale banking, commercial banking, retail banking, etc.). **'Lower-level'** refers to business lines or product lines within the primary lines of business (e.g., credit cards, residential mortgages, and auto finance within retail banking).

2.1 Current state of progress with respect to risk appetite frameworks

Six years after the financial crisis of 2008, most survey respondents consider themselves to have established adequate or leading RAFs at the enterprise level. However, significant work is needed to embed the RAF further into the organization to encompass lower-level business lines and legal entities.

RAFs are generally well developed at the enterprise level

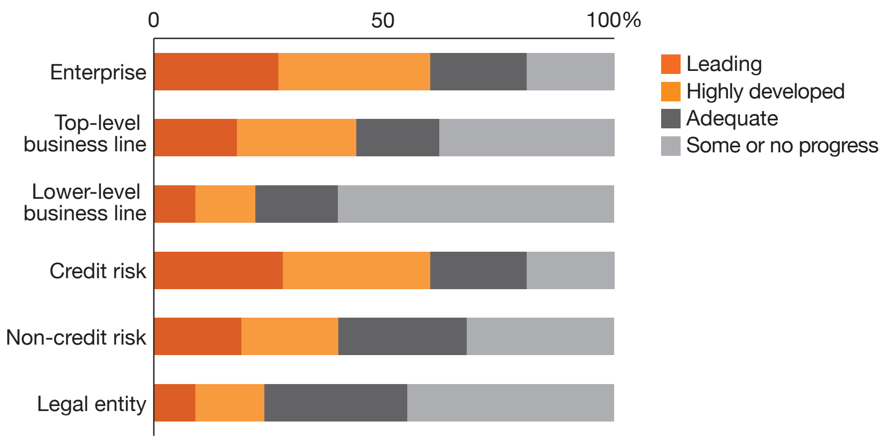
As shown in Figure 2 below, 60% of surveyed institutions characterized the state of development of the RAF as either 'leading' or 'highly developed' at the enterprise level within their respective firms. Only 20% of surveyed institutions believed that the current state of their RAF development was less than adequate. These responses reflected survey respondents' self-assessed views of the state of their RAFs. However, even survey respondents who indicated they have a leading or highly developed RAF at the enterprise level continue to face numerous challenges requiring future enhancements. Some firms continue to remain less than fully aware of the current shortcomings of their respective RAFs relative to those of other surveyed institutions. For most firms, further development of their RAFs and full implementation across all relevant areas of the organization will require sustained continued investment.

RAFs are less evolved at the business line level

The emphasis by regulatory bodies, including the FSB, on the need to allocate risk appetite to business lines and legal entities has started to have an impact on some survey respondents. A small percentage of the surveyed institutions reported their RAFs as either 'leading' or 'highly developed' at the business line level. These institutions have started to allocate risk appetite to business lines in a manner consistent with enterprise-level strategic business objectives and risk appetite. As a result, business line strategies and decision making have resulted in risk profiles that are more aligned with the risk appetites of these institutions.

Figure 2 shows that 40% of surveyed institutions acknowledged that their RAFs at the top-level business lines required further development. When assessing the maturity of their RAFs at the lower-level business lines, 60% of surveyed institutions believed that their RAFs were less than adequate. The state of RAF development was also less mature at legal entity levels for an overwhelming majority of the surveyed institutions. This is not surprising since the prevailing management hierarchy for financial institutions continues to be business lines rather than legal entities. The lack of progress in this area also reflects the survey respondents' skepticism of the benefits of articulating risk appetite at the legal entity level even though other regulatory initiatives such as resolution planning have continued to raise the importance of taking the legal entity view.

Figure 2 – Current state of risk appetite framework development[3]



2.2 Benefits of risk appetite framework development

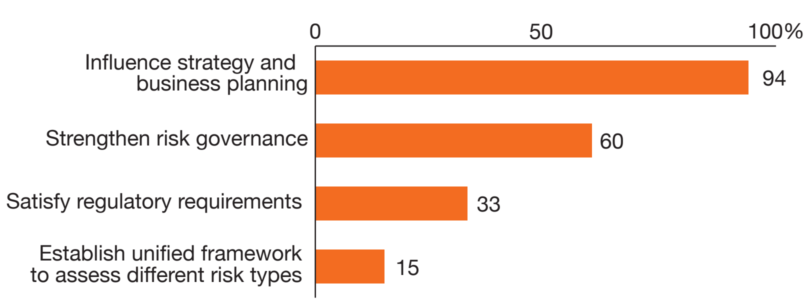
Integrating risk appetite into long-term business planning and day-to-day management decision making was the top motivator for the majority of surveyed institutions.

A majority of surveyed institutions were motivated to develop and implement their RAFs for reasons other than complying with supervisory expectations. RAFs have led to better risk awareness at all organizational levels and enhanced internal understanding of risk profiles. This is an encouraging development for the industry as a whole since current supervisory expectations are increasingly motivated by policy imperatives to strengthen the financial services sector rather than merely seeking rules-based compliance.

Figure 3 shows the key drivers that were most frequently cited by survey respondents for the ongoing development and implementation of their RAFs.

"We plan to invest heavily in developing and implementing a robust RAF in the next few years. By the time we complete our journey to implement the RAF, we are targeting to be a leader amongst our peers in this respect."
— Survey respondent

Figure 3 - Most important risk appetite framework motivators



3 Credit risk has been displayed separately due to the relative maturity of this risk type across surveyed institutions. Other financial and non-financial risk types (e.g., market risk, operational risk, reputational risk, etc.) have been grouped together as "non-credit risk types".

The RAF adds both risk and return considerations to strategy formulation and business decision making

Many surveyed institutions benefited from aligning risk appetite with strategic goals by explicitly incorporating both risk and return considerations into strategic and tactical business decision making. This alignment of strategic objectives and associated return targets within an institution's desired and actual risk profile augments the traditional enterprise risk management ("ERM") framework that has been in place at many of the surveyed institutions for several years.

Most survey respondents have completed one or more annual cycles of developing and/or refreshing their risk appetite statement(s) and obtaining requisite board approvals. The periodic reassessment of risk appetite has begun to provide valuable context for evaluating new strategic initiatives as well as more tactical decisions. In some firms, business lines have shown an increased sense of risk ownership from being able to provide input to risk targets in a manner that is consistent with their organization's overall risk appetite.

The RAF strengthens risk governance by integrating and leveraging separate risk management elements in a holistic manner

Surveyed institutions believed that the RAF had enhanced risk governance at different levels within their organizations and cited this as a motivator for embarking on the further development of their RAFs. Some survey respondents mentioned that they viewed the RAF as a platform for connecting different risk management elements such as risk policies, ERM, risk limits, economic capital ("EC"), and stress testing into a single unified framework that reinforced consistency.

"At a minimum, the increased collaboration between departments may allow the firm to respond more quickly to mitigate risk during future crises."
— Survey respondent

The RAF enables all relevant stakeholders to evaluate their decisions

Survey respondents indicated that by setting up more formalized processes to implement the RAF, institutions were able to facilitate and promote inter-departmental or cross-functional collaboration around analysis and decision making relating to enterprise objectives, risk appetite, risk profile, risk management and risk/return optimization. Undertaking the development of effective RAFs had also helped to foster collaboration and sharing of management information across functional units of an institution. Some interviewees said that the RAF led to more proactive, firmwide involvement in risk assessment than traditional ERM because the RAF required stakeholders to consider risk in their daily business decisions and activities.

The RAF creates a unifying framework to facilitate common understanding of different risk types across the organization

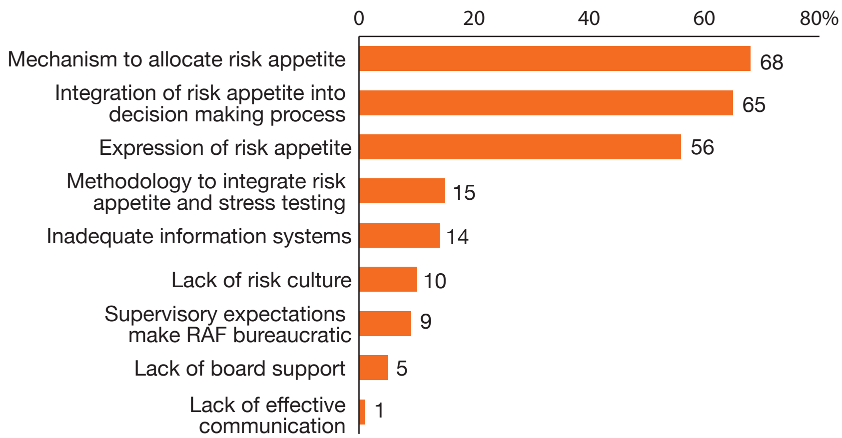
Some survey respondents viewed the RAF as a single platform where a comprehensive array of quantifiable and non-quantifiable risk types were expressed in unified terms against the same strategic plan and measured with a consistent set of tools. This consideration was a driver behind efforts to further enhance their RAFs. Survey respondents have increased the comprehensiveness of risk types and associated risk metrics covered within their respective RAFs.

2.3 Common challenges

The main challenges facing surveyed institutions include effectively allocating risk appetite across the organization, integrating risk appetite into decision-making, and articulating risk appetite through metrics and limits.

Despite going through the evolution of RAF development and implementation over a period of 3-4 years, many surveyed institutions recognized that they have not yet fully realized all benefits of their RAFs. Although significant progress has been made, most survey respondents acknowledged that they continue to face challenges in effectively implementing RAFs, as shown in Figure 4.

Figure 4 – Most frequently cited challenges



The challenges faced by the surveyed institutions are summarized below and further elaborated in subsequent sections of this paper.

1. Embedding the RAF into an organization

Defining the best approach to allocate risk appetite below the enterprise level into the broader organization is a major challenge for survey respondents. The wide range of concerns cited by survey respondents included number of metrics used, choice of appropriate metrics tailored to individual business lines, choice of methodology to allocate enterprise risk appetite, sequence for allocating risk appetite, and number of levels below the enterprise level for embedding risk appetite, as discussed in Section 3. Some survey respondents also mentioned that an overly structured and detailed approach to risk appetite allocation, calibration, and monitoring can be inefficient from a cost-benefit perspective.

2. Integrating risk appetite considerations into long-term business planning

Both interviews and survey responses confirmed that there is a need for further integration of risk appetite into long-term business planning and day-to-day business decision-making. Challenges included asynchronous timing of existing processes such as strategic planning, financial budgeting, and stress testing, along with unclear definition of roles and responsibilities and inadequate coordination among various stakeholders. Section 4 provides a more detailed review of this challenge and associated lessons learned by the surveyed institutions.

3. Articulating risk appetite

Articulating risk appetite and recording it in a well-written risk appetite statement that is understood consistently by all stakeholders remains a challenge. Section 5 discusses industry practices and highlights diverging approaches with respect to types of metrics, the mix of qualitative statements and quantitative metrics, and appropriate analytics for calibrating risk buffers.

In addition to the three primary challenges outlined above, the study revealed the challenges below.

Adequacy of other RAF elements

Successful implementation of the RAF is enabled by reliable data, appropriate analytics, strong risk culture, and effective risk policies. Survey respondents consistently cited that limitations related to data and models prevented aggregation and pivots of information for viewing through different lenses. Additionally, the analytics for calibrating risk appetite metrics for use at different levels or dimensions within the organization were also an area of continuing effort.

Figure 4 suggests that only a few survey respondents indicated that weaknesses in risk culture and lack of support from key stakeholders were remaining challenges for implementing effective RAFs. This is an encouraging indicator of the emergence of stronger risk culture and better intra-organizational coordination across risk management, finance, treasury, business planning, and business lines.

"I pretty much agree with everything the regulator requires."

"FSB 2013 propelled the RAF to be owned by the board, elevating the urgency to improve this aspect of risk management."

— Survey respondent

Supervisory expectations

Survey respondents appreciated the FSB guidance that established board and senior management roles and responsibilities along with the general principles for effective RAFs. However, the surveyed institutions cited a preference for more details in certain aspects of the guidance such as the end goal of allocating risk appetite to legal entities, and effective reconciliation of top-down risk appetite with bottom-up perspectives. In addition, survey respondents from large global institutions believed that better coordination among various national supervisors could result in more consistent guidance on RAF standards across the various jurisdictions of their operations.

Notwithstanding this stated preference for more guidance in certain areas, survey respondents also believed that granular supervisory expectations may be viewed as prescriptive, limiting necessary flexibility for successful RAF implementations.

"I cascade risk appetite to business lines and risk type. Further slicing and dicing my risk appetite to legal entities is unnecessary and does not add any value."

"I am waiting to see if I really need to cascade RAF to frontline officers. What does this mean anyway?"

— Survey respondent

3. Allocating risk appetite

The approach for allocating risk appetite varied widely across surveyed institutions and was driven by multiple factors, including the complexity of the business mix and the maturity of the RAF.

Survey respondents faced challenges in understanding effective ways to allocate risk appetite beyond the enterprise level. Some typical concerns were:
- Where should the risk appetite be allocated (e.g., among business lines, legal entities, or risk types)?
- How far below the enterprise level should risk appetite be allocated?

Sections 3.1 through 3.4 below highlight practices reported by the survey respondents in these areas.

"Setting the firmwide risk appetite is the first step; the aggregate risk appetite has to be allocated to the firm's business lines, legal entities and down to all relevant levels, which need to align with the firm's strategic and business plans"

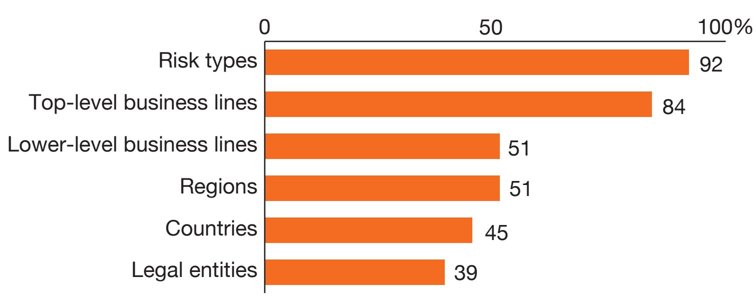
—Financial Stability Board, *Principles for an Effective Risk Appetite Framework*, 2013

3.1 Allocating risk appetite below enterprise level

Survey respondents reported a range of practices for allocating risk appetite below the enterprise level.[4] FSB guidance recommends allocating risk appetite to business lines and legal entities. In practice, more than 80% of surveyed institutions allocated risk appetite to either top-level business lines, risk types, or both, as outlined in Figure 5.

Reluctance to allocate risk appetite to lower-level business lines and to legal entities is prevalent, with only 50% of surveyed institutions allocating risk appetite to lower-level business lines, and only 38% to legal entities. Survey respondents acknowledged that they had not allocated risk appetite beyond the top-level business lines or risk types for many reasons, including absence of clear understanding of the end goal, insufficient familiarity with RAFs at lower levels of the organization, and lack of relevant data and analytics for calibrating and monitoring risk appetite metrics.

Figure 5 – Allocating risk appetite below the enterprise level

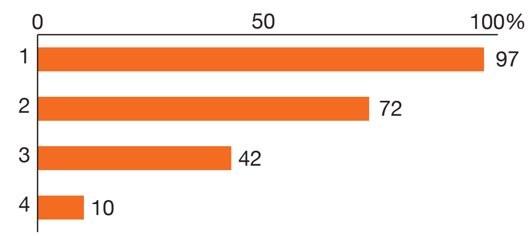


4 Some industry practitioners use the terminology "cascading risk appetite" as an alternative to "allocating risk appetite" to describe how both quantitative measures and qualitative statements of risk appetite are expressed below the enterprise level to other dimensions such as business lines, risk types, product lines, and legal entities, such that risk appetite considerations are embedded into the strategic and tactical decision making.

3.2 Determining level of allocation below enterprise level

Surveyed institutions also have allocated risk appetite to varying levels within the organization. As shown in Figure 6, a significant majority allocated risk appetite to at least two levels below the enterprise level: 97% allocated to one level below, 72% allocated to two levels below, 42% allocated to three levels below, and only 10% went as far as four levels below the enterprise level. Two surveyed institutions did not allocate risk appetite below the enterprise level.

Figure 6 – Highest number of levels of allocation below enterprise level

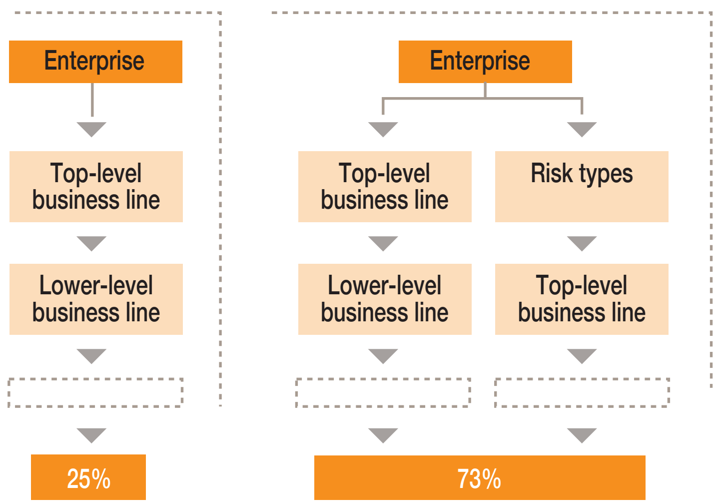


3.3 Different sequences for risk appetite allocation

As institutions continue to enhance their RAFs, some survey respondents mentioned that using a single sequence for allocating risk appetite did not provide sufficient flexibility to implement a robust RAF. To ensure that each decision was viewed through different prisms, some institutions used more than one sequence for allocating risk appetite below the enterprise level. Figure 7 illustrates two representative approaches: one that allocated risk appetite in a single sequence, and another that used multiple sequences.

Survey results showed that 73% percent of surveyed institutions relied on more than one sequence for risk appetite allocation. In general, as an institution's risk appetite framework matures, risk appetite tends to be allocated using multiple sequences.

Figure 7 – Sequences for allocating risk appetite



FSB guidance confirms the importance of accounting for bottom-up information while risk appetite is allocated:

"RAF should be driven by both top-down board leadership and bottom-up involvement of management at all levels, and embedded and understood across the financial institution."

"Financial institutions and supervisors should check that the 'top-down' risk appetite is consistent with the 'bottom-up' perspective through, for example, employee surveys, independent reviews, and internal reporting."

—Financial Stability Board, *Principles for an Effective Risk Appetite Framework*, 2013

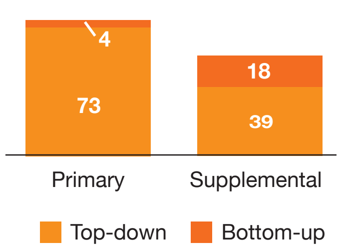
3.4 Top-down versus bottom-up approach

Supervisors and surveyed institutions agree that risk appetite should be formulated in a top-down manner. As outlined in Figure 8 below, 73 institutions used the top-down approach and only four institutions used a bottom-up approach to allocate risk appetite.

As lower levels of the organization become more conversant with addressing risk appetite considerations in their decision making, bottom-up approaches, in which lower-level business lines play a more active role in informing risk appetite, were more likely to be adopted. According to the survey, eighteen of the 73 firms that used the top-down approach supplemented their primary allocation with bottom-up information (please refer to Figure 7 for an illustration of primary and supplemental risk appetite allocation sequences).

As the implementation of RAF in business lines matures and as risk cultures develop further, surveyed institutions indicated they were more likely to incorporate information from lower levels of their organizations to help refine the top-down risk appetite set by the board and senior management.

Figure 8 - Allocation approaches[5]



5 One survey respondent did not answer this question

3.5 Risk appetite allocation examples

Figure 9 illustrates a range of risk appetite allocation sequences implemented by a representative sample of surveyed institutions. Each row in the figure represents an institution, while each column (level) represents the sequence in which risk appetite is allocated according to each institution's preferences. As shown in the figure, there is no dominant sequence for allocating risk appetite below enterprise level across the surveyed institutions.

Figure 9 – Sequences by which risk appetite is allocated for an illustrative sample of 16 G-SIBs

4. *Integration of risk appetite framework with relevant business processes*

As discussed in Section 2.2, influencing strategic planning and day-to-day decision making is cited as the top objective underlying the development and implementation of RAFs. This is consistent with the FSB guidance.

While the alignment of the RAF with business plan, strategy development, capital planning, and compensation schemes is critical to the implementation of an effective RAF, interviews with survey respondents suggest that they have succeeded in linking their RAFs to only a limited number of these areas. The implementation of the RAF should be as broad as possible, with risk appetite considerations woven into all relevant aspect of the firm including risk-related activities that are less visible (e.g., new product approvals, client onboarding, transaction suitability, incentives). These broad linkages will help to truly embed the RAF into the organization at all levels—in the executive suite and among junior employees, across the enterprise and within business lines, when formulating strategy and in making day-to-day decisions, through both an external perspective and internal lens, for line units as well as staff functions, while taking the long view and also in the short term—and help improve risk culture within the institution.

"The RAF should be aligned with the business plan, strategy development, capital planning and compensation schemes of the financial institution."

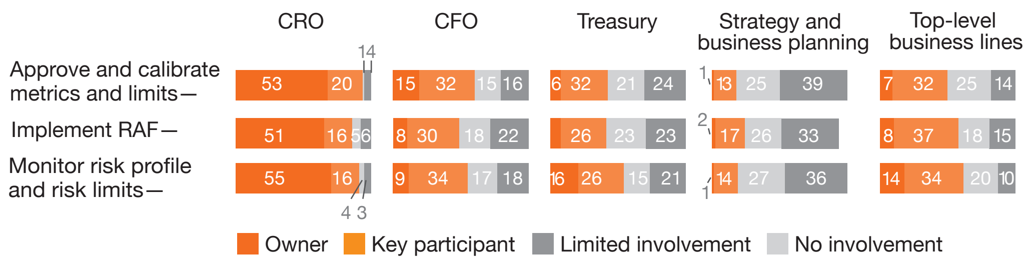
—Financial Stability Board, *Principles for an Effective Risk Appetite Framework*, 2013

4.1 Involvement of risk appetite framework stakeholders

When asked about the degree of integration and coordination across various departments relevant to the RAF, survey respondents consistently indicated that observed levels of involvement with strategy and business planning departments were less than ideal. This was corroborated by the survey findings, which revealed that in 75% - 85% of the surveyed institutions, business planning personnel had either no involvement or limited involvement in RAF development, implementation and monitoring, as shown in Figure 10.

Generally, all survey respondents interviewed believed that active participation of top-level business line management in RAF decision making is desirable, but the extent of current involvement needed improvement. Numerous surveyed institutions stated they have concrete plans to better integrate business line management into the RAF in the near future. As shown in Figure 10, in 40%–50% of the surveyed institutions, top-level business line leaders were not key participants in RAF development, implementation and monitoring.

Figure 10 - Roles and responsibilities of risk appetite framework participants



4.2 Synchronizing planning cycles

Over time, many institutions have developed processes, run by different corporate functions, for strategic planning, capital and liquidity planning, financial forecasting/budgeting and more recently, risk appetite formulation. These processes often operate on different calendar cycles, some driven by deadlines for financial reporting, others by regulatory filings. Many survey respondents said that synchronizing these cycles was critical for effectively integrating risk appetite considerations into business decision making. However, survey respondents also cautioned that synchronizing plans involved significant operational challenges as well as longer planning cycles to allow time for gathering and reconciling the opinions of additional stakeholders. This practical challenge has led some owners of these planning processes to resist efforts to align their planning cycles.

A few survey respondents mentioned that as risk culture improved and business lines started taking more ownership of risk, their business plans increasingly incorporated risk appetite considerations. Consequently, their business plans were better aligned with top-down risk appetite, enabling reconciliation of enterprise and lower level perspectives.

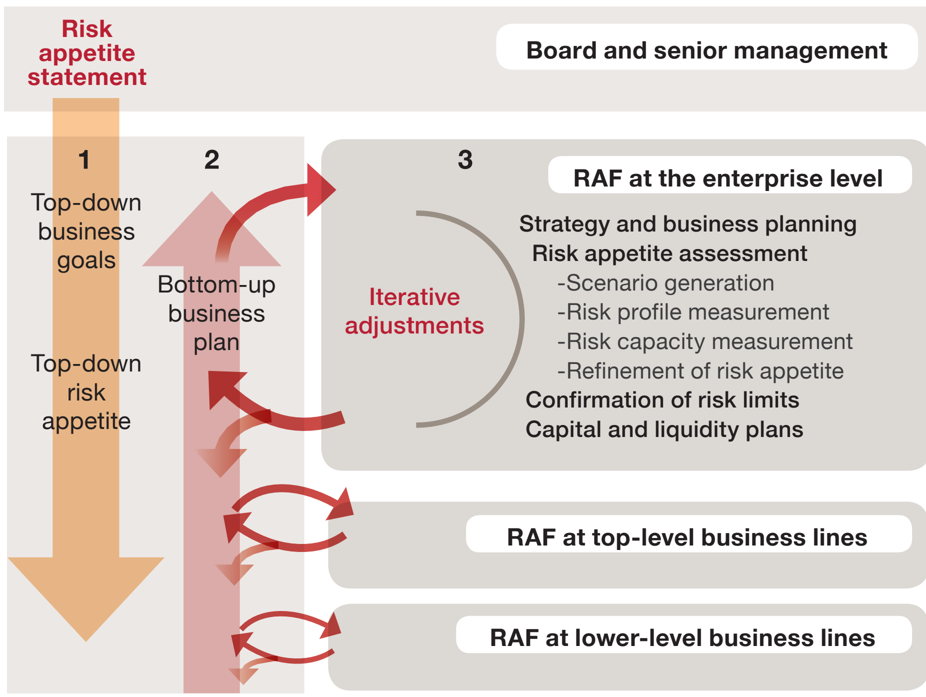
> *"After discussing risk appetite with other firm participants for a few years, business lines are able to submit a better thought-out plan."*
> *— Survey respondent*

Figure 11 is an illustrative example of the approach adopted by some survey respondents for synchronizing risk appetite assessment with the existing business planning cycle. Business planning is preceded by top-down communication of business strategy as well as risk appetite, perhaps as only a broad, qualitative expression in the early stages. The business planning process then proceeds as follows:

- Business plans of lower-level business lines are aggregated and shared upward for use by senior management to assess consistency with enterprise risk appetite
- Senior management at the enterprise level and top-level business lines synchronize their efforts in an iterative process to create an appropriate capital plan and liquidity plan
- To assess whether the business plan and associated capital and liquidity plans are consistent with the institution's risk appetite, the risk profile and risk capacity are measured via stress testing and economic capital applied to the same proposed business plan iteratively until the different plans are in alignment with each other and the enterprise-level risk appetite.

This detailed planning process at the enterprise and top-level business lines provides feedback to all levels of the institution. In each of the steps shown in Figure 11, feedback is used to help fine-tune business plans and associated capital and liquidity plans to better meet the institution's business and risk strategies.

Figure 11 - Integration of the risk appetite framework into existing business planning process



Success requires persistence—one large G-SIB had to undertake multiple attempts before successfully synchronizing RAF-related work flows across all its functional teams and processes. Separately, many survey respondents mentioned that the Internal Capital Adequacy Assessment Process ("ICAAP") and Comprehensive Capital Analysis and Review ("CCAR") requirements have magnified the need for synchronizing various planning cycles.

5. Risk appetite statements and metrics

"The articulation in written form of the aggregate level and types of risk that a firm is willing to accept in order to achieve its business objectives. It includes qualitative statements as well as quantitative measures expressed relative to earnings, capital, risk measures, liquidity and other relevant measures as appropriate. It should also address more difficult to quantify risks such as reputation and money laundering and financing of terrorism risks, as well as business ethics and conduct."

—Financial Stability Board, *Principles for an Effective Risk Appetite Framework*, 2013

While there is broad agreement on the principle of developing a risk appetite statement ("RAS") to articulate the firm's risk appetite, in practice, the content of an RAS can be widely diverse in terms of (a) balancing qualitative and quantitative components, (b) risk types included in the RAS, and (c) appropriate metrics that describe the risk appetite at both the enterprise level and other dimensions.

5.1 Mix of qualitative and quantitative factors

Consistent with the FSB guidance, survey respondents broadly agree that both quantitative metrics and qualitative descriptions are essential components of an effective RAS. As shown in Figure 12, a majority of respondents, around 80%, used a combination of quantitative metrics supported by qualitative statements at the enterprise and top-level business lines. Three survey respondents used just quantitative expressions of risk appetite in their RAS across all levels of the organization.

At the enterprise level, surveyed institutions appear to have converged on two broad types of RAS. One group used a condensed form of RAS with high-level qualitative statements and 5-10 firmwide quantitative targets relating to risk concentrations, earnings, capital and liquidity, and return/risk measures. As shown in Figure 12, about half of the survey respondents only used such high-level measures. The second group also included a number of additional metrics broken out by risk types and business lines in the RAS. Figure 12 shows that 33% of firms expressed a detailed set of qualitative outcomes as well as quantitative measures in their RAS at the enterprise level. Survey respondents that used this combination also relied increasingly on quantitative metrics to allocate risk appetite below the enterprise level into lower-level business lines.

Figure 12 – Qualitative vs. quantitative nature of risk appetite statement at various levels

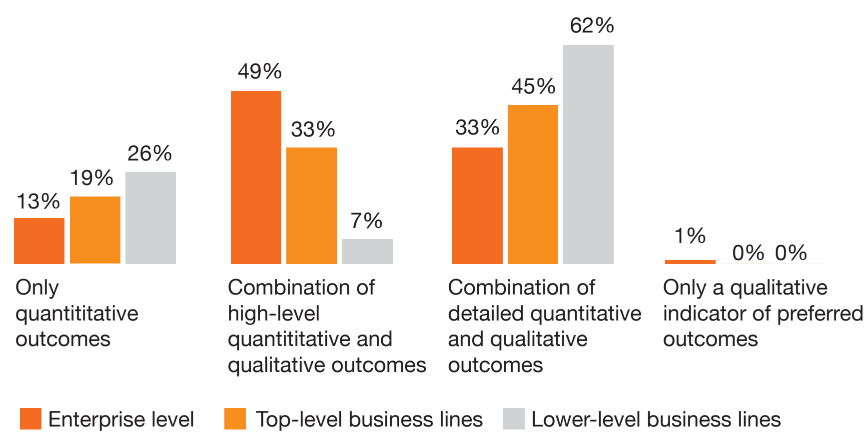


Figure 13 illustrates the components of an enterprise RAS based on a composite of practices followed by survey respondents. It describes the four typical components of an enterprise RAS. Most survey respondents use some or all of these components in varying degrees based on specific preferences of each institution.

Figure 13 - Enterprise-level risk appetite statement components with categories of metrics and some sample metrics

A. High-level qualitative statements

- Scope of RAS
- Linkage to mission statement and core values
- Goals in areas such as strategic business intent, capital adequacy, liquidity, desired risk profile, reputation, and enterprise capabilities
- Key risks in relation to strategy and core businesses

A. Qualitative description of guiding principles related to the firm's risk appetite

B. Enterprise-wide common quantitative metrics

Risk concentrations	Earnings	Capital and liquidity	Return /risk measures

B. Consistent articulation of quantitative risk and return metrics for aggregation and allocation to business lines and risk types

C. Qualitative guidance & quantitative metrics by risk type

Credit
Limits, product mix, profitability, periodic recalibration

Market
Limits, product mix, profitability, periodic recalibration

Liquidity & funding
Limits, sources and uses, cost efficiency

Operational
Efficiency, resilience, key indicators

Business
Long-term viability, sustainability, stakeholder, confidence

Reputation and conduct
Core values, customer-centric business conduct, corporate social responsibility

Regulatory and compliance
Supervisory expectations, laws and regulations

C. Metrics specific to risk types or business lines

D. Each qualitative guidance and quantitative metric can have multiple dimensions such as under normal and stressed environments

D. Metrics expressed in multiple dimensions

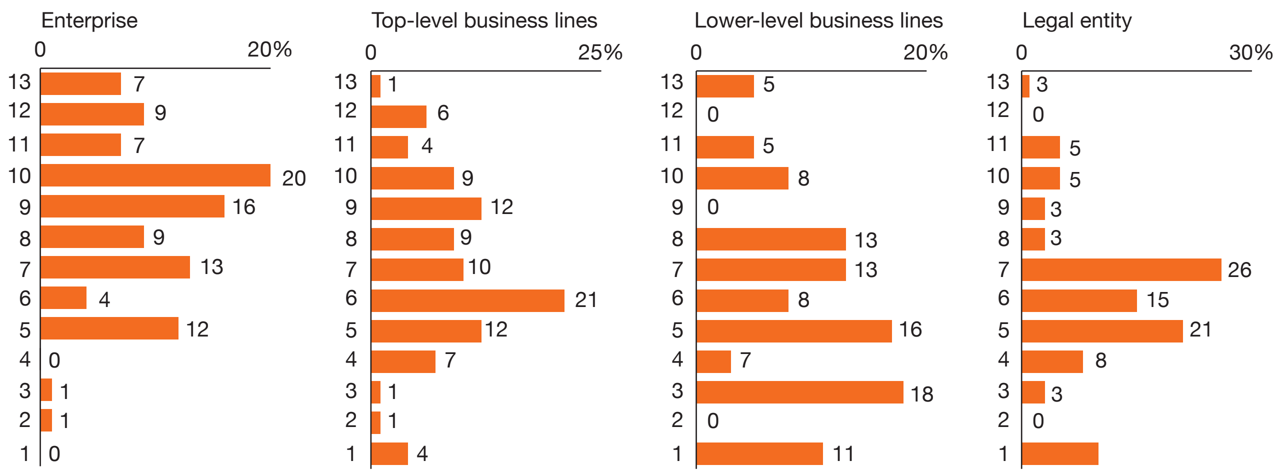
5.2 Risk types to be included in the RAS

Survey respondents generally agreed with supervisory expectations that promote a comprehensive view of the enterprise's risk exposures. Traditional quantifiable risk types (e.g., credit risk, market risk, funding and liquidity risk, and operational risk) are typically the first to be included in the RAS. Many survey respondents mentioned recent active efforts to include less quantifiable risk types (e.g., business risk, reputation and conduct risk, regulatory and compliance) driven both by supervisory expectations and expanded risk awareness within their institutions.

In the case of less quantifiable risk types, the RAS typically reflected related policies and qualitative guidelines. However, there is an increasing trend to use proxy metrics, where available. For instance, many survey respondents quantify reputational risk using proxies such as brand health, customer-centric metrics, and employee satisfaction surveys.

Figure 14 shows that survey respondents tend to describe more risk types in the RAS at the enterprise level and for top-level business lines and address fewer risk types within lower-level business lines and legal entities. This is intuitive since many risks, particularly the less quantifiable types, are more appropriately managed at higher levels within the organization.

Figure 14 – Number of risk types covered in risk appetite statement at various organization levels



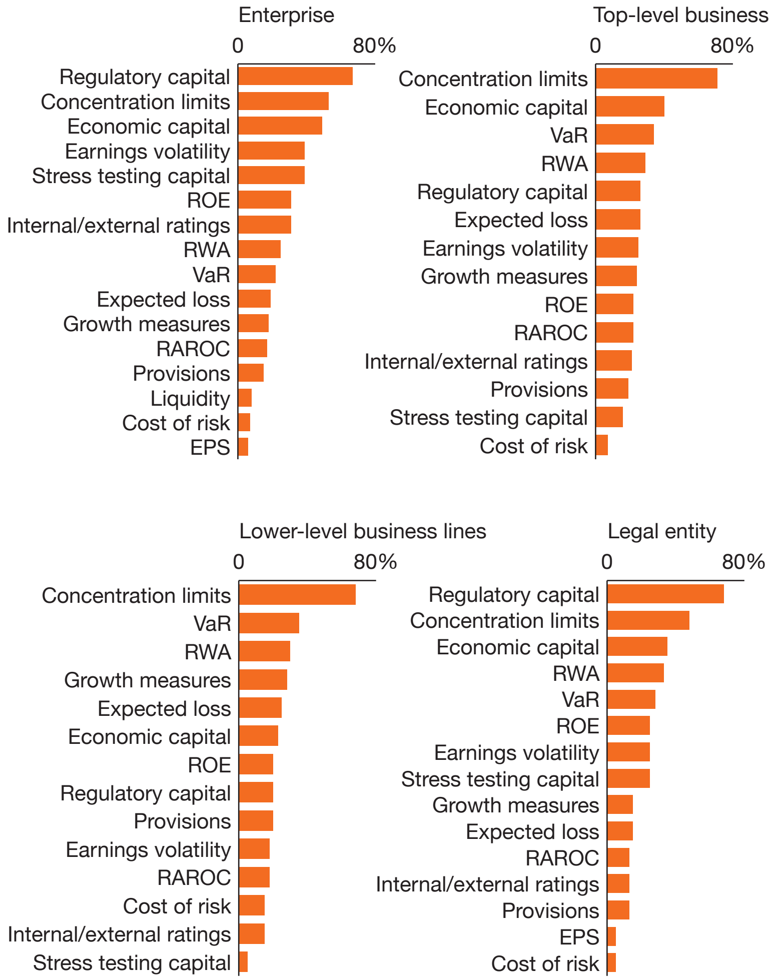
5.3 Choice of specific metrics

As shown in Figure 15, there is a wide range of binding metrics used by survey respondents across various levels of their institutions. While stress testing-driven regulatory capital requirements are the top binding metric at the enterprise and legal entity levels for around 68% of institutions, it is applied as a binding constraint at the business line levels for approximately 25% of institutions. Heightened regulatory capital requirements, driven by various regulations such as Comprehensive Capital Analysis and Review and Basel III, have led many surveyed institutions to emphasize regulatory capital in their RAS.

Despite less emphasis by regulators on economic capital, it continues to be an important metric for many survey respondents at various levels, as outlined in Figure 15. During interviews, survey respondents cited the following reasons for continued inclusion of economic capital in RAS:

- **Economic capital is entrenched in risk management practice:** For many survey respondents, economic capital is still a significant component of risk quantification and management. Hence, crafting an RAS with economic capital metrics makes it easy to allocate risk appetite across the organization.
- **Aggregation and allocation of risk**: A number of survey respondents said that economic capital is still the most effective way to allocate risk across businesses. A few firms cited economic capital as an effective means to aggregate credit, market, and operational risks. Funding and liquidity risks are yet to be widely incorporated in economic capital approaches.
- **Diversification benefits:** Many institutions still consider economic capital to be the favored methodology for modeling correlations between various asset classes, risk types, sectors, and regions.

Figure 15 – Top binding constraints for risk appetite statements at various organizational levels



As a subset of respondents, G-SIBs cited their top 5 binding constraints at the enterprise level to be regulatory capital, risk weighted assets ("RWA"), earnings volatility, concentration limits, and stress testing capital.

Institutions might choose to express a set of metrics for business lines that are different from those used at the enterprise level. Finding an optimal methodology for translating enterprise-level metrics to metrics tailored for business lines and lower operating units is a challenge for many surveyed institutions. To illustrate, a lower-level business line originating residential mortgages might need to understand how regulatory capital, RWA, and economic capital relate to more detailed risk metrics such as FICO scores, concentration limits by mortgage types (such as fixed or adjustable, by region or by borrower quality), and net interest income.

Converting enterprise-level metrics to business line-level metrics is necessary to prevent institutions from unknowingly taking excessive risk or failing to optimize risk versus return. If institutions are unable to translate their metrics appropriately, an alternative approach may be to communicate a qualitative risk appetite to lower-level operating units and rely on upper-level business line and risk management staff to monitor alignment with risk appetite.

6. Conclusion

Both financial institutions and supervisors agree that the RAF is an essential component for effective risk governance. Surveyed institutions are at different stages of maturity in the development and implementation of their RAFs. Industry practices are markedly divergent with respect to operationalizing different elements of the RAF and linking it to other governance, management, and business processes. However, there is industry convergence with RAFs becoming more evolved at the enterprise level. Less encouragingly, even six years after the financial crisis, more than a third of survey respondents acknowledge that their RAFs are not adequately developed at the lower levels of the organization where day-to-day decision making ultimately affects the overall risk profile of the firm.

Developing and implementing an effective RAF does not require institutions to develop an entirely new set of processes and practices. Instead, institutions should, wherever possible, leverage and strengthen existing capabilities that are used to manage the enterprise. Successful implementation of the RAF is enabled by strong risk culture, effective risk policies, appropriate analytics, and reliable data. Firms need to continue making investments to enhance both the analytics and data required for calibrating risk appetite metrics for different organizational and risk dimensions.

Allocating risk appetite below the enterprise level is challenging, varies widely across institutions, and is driven by multiple factors, including complexity of business mix and maturity of the RAF. Consequently, surveyed institutions have not coalesced on practices for cascading risk appetite down throughout the enterprise. However, some institutions appear to be making a concerted effort to extend their risk appetite allocation approaches to include different organizational hierarchies, more risk types, and feedback between top-down and bottom-up perspectives.

Converting enterprise-level metrics to business line-level metrics is necessary to prevent institutions from unknowingly taking excessive risk or failing to optimize risk and return. If institutions are unable to translate higher-level quantitative expressions of risk appetite to lower-level business lines, they should consider using more qualitative articulations while ensuring that business line management is monitoring ongoing alignment with enterprise risk appetite.

Importantly, survey respondents view RAF implementation as more than a regulatory exercise. This is an encouraging development for the industry as a whole since current supervisory expectations are motivated by policy imperatives to strengthen the financial services sector rather than merely seeking rules-based compliance. The surveyed institutions appreciate the FSB guidance, which established board ownership of the RAF and laid out general principles for effective RAFs. However, survey respondents also cite a preference for more detail around supervisory expectations for extending the RAF to legal entities and reconciling top-down risk appetite with bottom-up perspectives. In addition, global institutions believe that coordination among various national supervisors can result in more consistent guidance on RAF standards.

Given the current and anticipated attention given to RAFs by the industry and supervisors, we expect to see significant developments in the coming years. The implementation of the RAF should be as broad as possible, with risk appetite considerations woven into all relevant aspects of the firm. These broad linkages will help to fully realize the benefits of an effective RAF and improve risk culture, sustain the enterprise over the long-term, and strengthen institutional resilience in times of crisis.

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