Global Pension and Sovereign Funds Risk Management survey

Current and emerging risk management trends

Contents

Introduction

As companies navigate the next normal and grapple with the lingering effects of the pandemic, enterprise risk management (ERM) has risen to the top of the agenda of management and the Board. ERM has become a necessity to help organizations better understand and proactively integrate risk and opportunities into ‘everything they do’. In order to achieve this successfully, they should rethink the mandate and attributes of the ERM function.

COVID-19 has accelerated existing trends while creating new ones and will likely be remembered as one of the most significant catalysts of business change in modern times. Organizations are not necessarily facing net new risks; rather, some risks have morphed, increased and/or operating in tandem with potential knock-on effects and consequences. People, mental health, and well-being are becoming some of the greatest threats in managing the workforce of the future. Environmental, social and governance (ESG) isn’t an option anymore and expected to be in all organizations' DNA. Innovative disruption, cyber and data privacy are at all-time-high and at the heart of the ecosystem.

In this environment, organizations can't afford to solely react and improvise. And the industry has taken great leaps towards ramping-up their risk management capabilities across risk classes, from portfolio construction, corporate activities down to public and private deals, while seeking new ways for the risk function to continuously bring value to the organizations and its stakeholders.

KPMG in Canada launched a web-based Global Pension and Sovereign Funds Risk Management survey (“the Survey”) in 2021 in order to evaluate how pension and sovereign funds (“the Industry”) around the world are advancing and shaping their risk management practices to their existing and future business needs, objectives and ever evolving risk landscape.

Ultimately, the objective of the Survey is to enable organizations to evaluate their position and maturity against mainstream and leading industry risk management practices. This Survey will be conducted periodically, with a potential expansion of the number of participants, in order to evaluate progress and remain relevant and current to clients.

The Survey’s analysis and findings were compiled based on the responses of >25 pension and sovereign funds located across 13 countries in five continents. Participants included funds with assets under management (AUM) ranging from USD 50b or less to USD 500b or more.

Executive summary

The risk function is being equipped with the authority and structure to drive the risk agenda.

89% have an integrated risk function for both investment and non-investment risks

79% have appointed a Chief Risk Officer (CRO)

Management and Board risk oversight roles are largely defined, although the model adopted still vary across organizations from specifically established to leveraged committees.

96% have formally defined risk oversight responsibilities at management and the Board level

48% have risk oversight by dedicated Board Risk Committee or existing sub-committee

52% have set-up a central Management (Risk) Committee, either dedicated or leveraging existing committee(s) in place

Most organizations have defined risk appetite statements, yet still face challenges in setting and operationalizing statements and metrics especially for non-investment risks.

19% are confident about their non-investment risk appetite metrics

30% have fully operationalized their risk appetite for non-investment risks

Organizations have confidence in their risk management capabilities for investment, legal and regulatory risks. Although organizations still struggle in managing non-investment risks (e.g. operational and strategic risks), they are elevating these risks as well as some new risks (e.g. ESG, talent/ people) to the top of the management and Board agenda.

Top risks with growing focus

Cyber security	ESG/ responsible investing	Market	Operational	Strategic	Talent/ people
85%	52%	44%	37%	37%	33%

Risk management maturity spectrum

Market	Liquidity and leverage	Credit	Legal and regulatory	Operational	Strategic	ESG	Talent / people
67%	59%	56%	56%	33%	30%	30%	22%

The risk function is integrated into key strategic and business planning/ processes across the organization.

92% actively or partially involve the risk function in the strategic planning process

89% actively or partially involve the risk function in asset allocation and total fund management

'Tone at the top' is the most powerful driver that attributes to a robust risk culture.

100% have indicated that 'Tone at the Top / Governance' is the #1 component of risk culture

Risk management tools and methodologies continue to evolve as organizations involve the risk function in the wide-ranging investment management cycle, and independent evaluation of non-investment risks throughout the deal cycle.

Risk measurement and monitoring activities are largely conducted collaboratively between the risk and deal teams

74% Pre-deal

81% Post-deal

85% conduct non-investment risk assessment

Organizations are still in the midst of creating synergies and aligning the foundational pillars of their various risk and control programs.

52% are yet to fully align their risk and control rating criteria

78% are still using fragmented technologies or tools to support their programs

The industry is shifting towards creating integrated data platforms and will continue to progress in their digital transformation journey.

30% have an integrated GRC system

78% will continue to progress in their digital transformation journey to obtain new data driven insights

Source: 2021 global pension and sovereign funds risk management survey, KPMG in Canada, 2021.

The rise of the risk function

The risk function is taking a 'front-seat' in organizations, demonstrating the efforts and investments to continuously strengthen the second line of defense (LOD), and providing it with the authority, stature, structure and support from management and the Board to drive the risk agenda.

— Almost all organizations (89%) have adopted an integrated risk function to cover all risk classes, including both investment and non-investment risks, enabling them to provide a central, portfolio and transversal view of all risk management activities, as well as consistency in their application.

— The large majority of organizations (79%) have appointed a Chief Risk Officer (CRO), providing the risk function with the stature and authority to deliver on the risk mandate. In practice, while some organizations (43%) have a dedicated CRO, others (36%) have expanded the role of their CROs to include other functions (e.g. Chief Financial and Risk Officer), either from legacy or to generate greater functional integration and efficiencies between risk related programs.

— The large majority of organizations have a clear and documented CRO/risk function mandate (75%) that covers all material risk classes (82%). The CRO and/or risk function mandate is regularly reviewed and updated (86%), subsequently approved at the Board level (89%). This indicates the continuous evolution of the role of the risk function and need of support from the Board. There is however room to more formally link performance review to the mandate, with only 46% of organizations currently adopting this practice.

— The size and composition of the risk function largely vary across organizations, likely based on its mandate and level of integration in the organization. Nevertheless, the large majority of organizations (74%) expect to increase their investment in the risk function over the next one to three years, demonstrating the ambition to continuously expand and deepen risk management capabilities within the organization.

Centralized/Integrated Risk Functions *(see detailed chart in Appendix)*

89% have an integrated risk function for both investment and non-investment risks

Stature of the Risk Function *(see detailed chart in Appendix)*

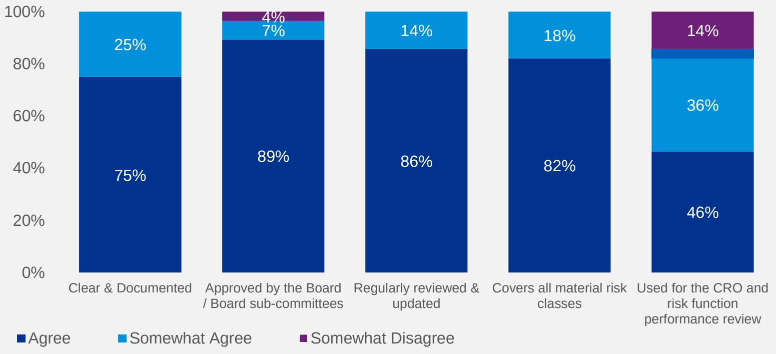
79% have appointed a Chief Risk Officer (CRO)

43% have dedicated CROs

36% have CROs with a dual role

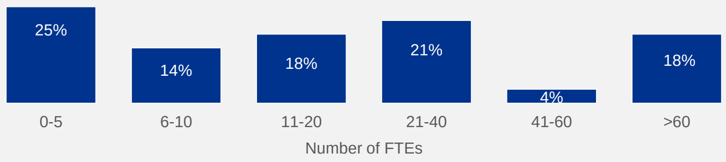
Clear risk management mandate

Q: To what extent do you agree with each of the following statements about the mandate of the Chief Risk Officer and/or the risk function?



Risk Function Resourcing

Q: How many full time employees ("FTEs") do you have in your risk function (inclusive of both investment and non-investment risk management functions)?



Source: 2021 global pension and sovereign funds risk management survey, KPMG in Canada, 2021.

Risk oversight in the boardroom

Board Risk Oversight Model *(see detailed chart in Appendix)*

48% Risk oversight by dedicated Board Risk Committee or existing Board sub-committee

11% Risk oversight at the full Board level

37% Risk oversight by two or more distinct Board sub-committees

While it remains the responsibility of the Board of Directors to oversee risk management activities and the key risks, in practice, some organizations have delegated the risk oversight responsibilities, fully or partially, to one or several Board sub-committees. The Board risk oversight committee(s) are regularly engaged on risk management matters, although some organizations still recognize the need to improve on the non-investment risks.

— Almost all organizations (96%) have formally defined risk oversight responsibilities at the Board level, although the model and risk allocation between the sub-committees still vary.

— Some organizations (48%) have an existing Board sub-committee (e.g. Audit or Investment Committee) or a dedicated Board Risk Committee to oversee both investment and non-investment risks. Others follow a dual model whereby risks (investment and non-investment) are overseen by two or more distinct sub-committees (37%). Only a few (11%) maintain risk oversight directly at the full Board level. Regardless of the underlying model adopted, it is critical that organizations ensure they:

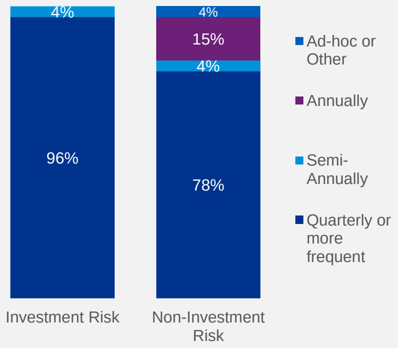
  - ➢ clearly define how risk oversight is allocated to the Board and/ or Board sub-committees;
  - ➢ provide a complete and holistic view of all risk exposures and related risk management activities;
  - ➢ allocate sufficient time to enable the Board and/or Board sub-committees to adequately and effectively exercise their risk oversight responsibilities; and
  - ➢ evaluate regularly the effectiveness of the Board in exercising its risk oversight responsibilities.

— Organizations are maintaining regular and continuous dialogue with the Board, with almost all of them (96%) engaging the Board and relevant sub-committee(s) at least quarterly on investment related risks, and a large majority (78%) for non-investment risks.

— The majority of organizations (64%) consider their investment risk reporting to be mature while the large majority (79%) still see room for improvement on non-investment risks.

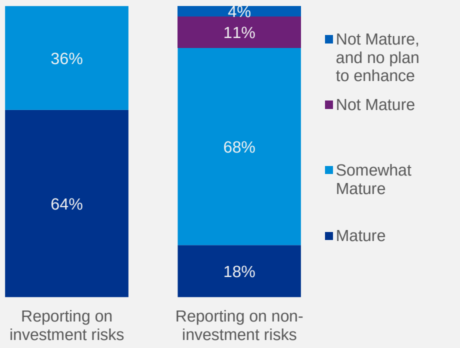
Board Risk Reporting Frequency

Q: What is the frequency of risk reporting to the Board?



Risk Reporting Maturity[1]

Q: How mature is the risk reporting at your organization?



1: Risk Reporting Maturity includes data for both Board and Management reporting

Source: 2021 global pension and sovereign funds risk management survey, KPMG in Canada, 2021.

Management: all eyes on risk management

The management risk oversight structure varies across organizations, with some establishing a central Management (Risk) Committee with representation from leadership and business functions to oversee and obtain a holistic and transversal view of all risk classes, and/ or dual sub-committees to provide focus on specific risk classes (e.g. Investment or Operational Risk Committees). The management risk committee(s) are regularly engaged on risk management matters, though some organizations still recognize opportunities to further improve on the non-investment risk related content shared.

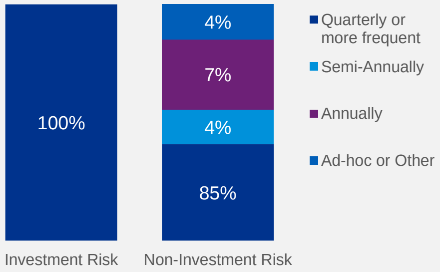
- Almost all organizations (96%) have a formal management risk oversight structure in place to oversee and direct risk management activities across risk classes.
- The majority of organizations (52%) have set-up a central Management (Risk) Committee, either specifically established or leveraging existing committee(s) in place, to obtain a more comprehensive, transversal, and portfolio view of risk exposures across and between investment and non-investment risks. Some organizations still maintain a dual or distributed management risk oversight model (48%) whereby the various risks are allocated to distinct committees. This model may include organizations that have also established sub-committees to support the central Management (Risk) Committee in overseeing specific risks (e.g. Operational Risk). A few organizations (19%) are yet to establish a formal management risk oversight structure to oversee non-investment risks.
- There is frequent reporting (at least quarterly) to Management on investment (100%) and non-investment (85%) risks. This reflects the need for Management to keep regular risk data flow to drive the risk agenda, inform risk-return discussions and necessary decisions.
- The central Management (Risk) Committee is commonly composed of the Leadership team and Heads of Departments from across the organization, providing it with the ability to collectively oversee risks, share insights, and drive accountability, in addition to the necessary authority to discuss, direct, and challenge risk management matters.

Management Risk Oversight Model

Q: Which of the following structure(s) best describe(s) management risk oversight?

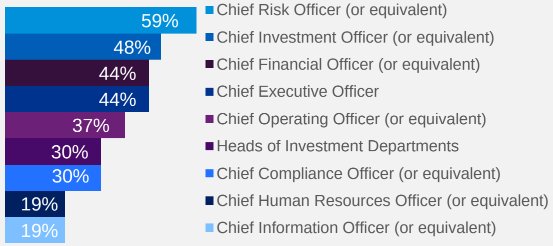
Management Risk Reporting Frequency

Q: What is the frequency of risk reporting to Management?



Management Risk Committee Composition

Q: If your organization has a central Management Risk Committee, please select all members that are part of the Committee.



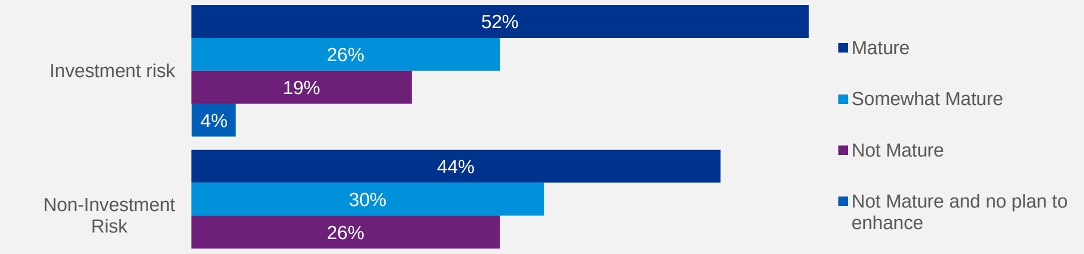
Source: 2021 global pension and sovereign funds risk management survey, KPMG in Canada, 2021.

KPMG

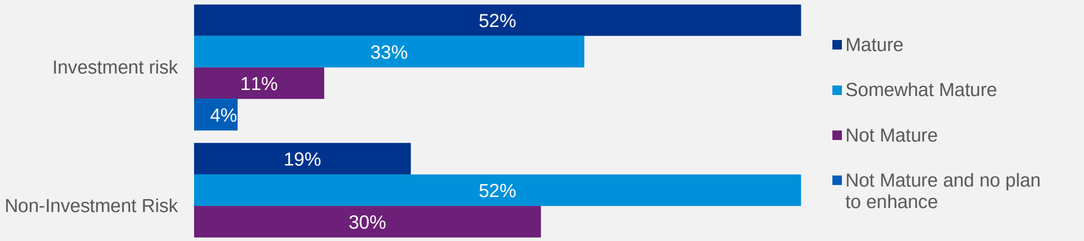
Risk appetite: To take risk, or not to take

Risk Appetite Statements and Metrics Maturity

Q: Select the maturity level which best represents your organization's risk appetite statements

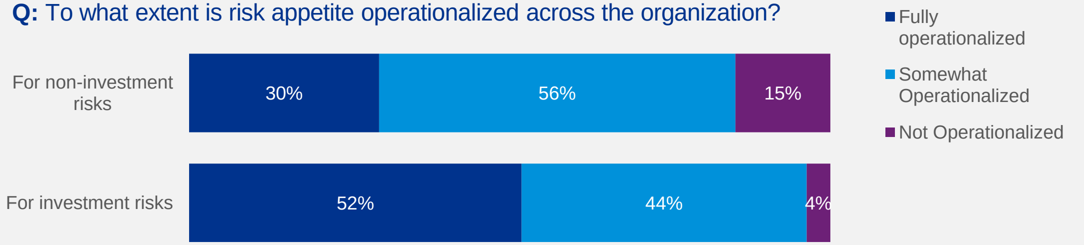


Q: Select the maturity level which best represents your organization's risk appetite metrics



Operationalizing Risk Appetite

Q: To what extent is risk appetite operationalized across the organization?



How much of which risks are organizations willing to take and/or accept to achieve their objectives? Risk appetite is the backbone of risk management that sets the clear and necessary boundaries within which risks across categories should be managed, in pursuit and protection of value. While most organizations have defined their risk appetite statements, some still face challenges in setting and operationalizing relevant statements and metrics, especially for non-investment risks.

— The majority of organizations have well defined and mature risk appetite statements (52%) and metrics (52%) for investment risks such as market, credit, liquidity or leverage. A smaller proportion of organizations are, however, confident about their non-investment risk appetite statements (44%) and metrics (19%), such as operational, legal and regulatory, or strategic risks.

— The majority of organizations (52%) indicate that they have fully operationalized their risk appetite statements and metrics for investment risks, against only 30% for non-investment risks.

Experience demonstrates that despite recent efforts to define risk appetite statements for non-investment risks, organizations are still grappling with articulating meaningful metrics due to limited historical data and experience in setting and back-testing limits and thresholds.

Source: 2021 global pension and sovereign funds risk management survey, KPMG in Canada, 2021.

Alert: Key risks in focus

Organizations have over time and experience built and solidified their capabilities in managing more traditional or 'core' risks such as investment, legal and regulatory risks. Organizations, however, are still relatively less confident in their ability to manage non-investment risks such as operational (e.g. data protection, third party, model) or strategic risks. The rapidly evolving operating environment and risk landscape, further fueled by the pandemic, has more recently elevated new risks to the top of the Management and Board agenda (e.g. ESG, Talent/ People), with only a few organizations believing that they have mature risk management practices in place to address these risks.

— Cyber security is top of mind for almost all organizations (85%) ranking it as #1 growing focus on the Management and Board agenda, yet 52% of organizations still consider that there is room to improve their risk management maturity. Cyber threats are relentlessly evolving and increasing in both sophistication and severity, thus compelling organizations to remain agile and continuously innovate.

— The broader Operational and Strategic risks are amongst the top five areas of focus. Indeed, only 33% and 30% respectively consider their existing programs as mature, while 67% recognize that there are plans or room for improvement.

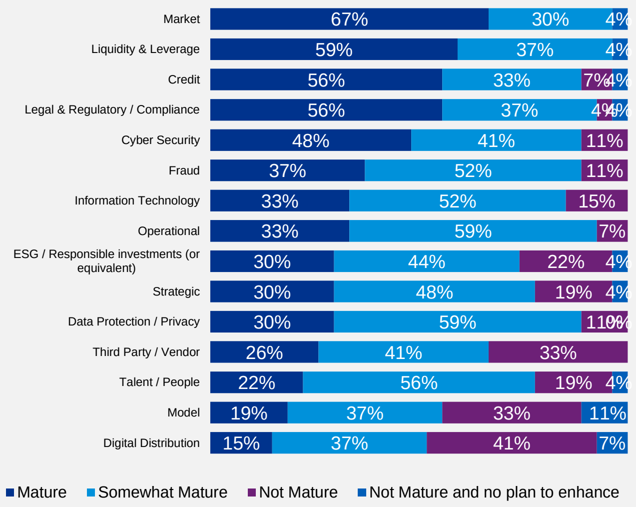
— The majority of organizations (52%) rank ESG/ Responsible investing as their second growing focus. Sixty-six percent of them however recognize that more can be done to manage this risk. Sustainability is rapidly becoming more than a reporting requirement or 'optional'. Organizations are increasingly factoring and evaluating ESG considerations across business activities including investments, deals, external fund managers, vendors, etc.

— Talent/ People lingers as a key risk priority yet only 22% of the organizations consider it to be adequately managed. Although not new, the pandemic has accelerated and created new people risks and challenges. Workforce digitalization, 'pandemic epiphanies', employee isolation and 'always on' culture or global hunt for talent are amongst many cumulative and intertwined factors that lead organizations to rethink their talent strategies and support employees' mental health and well-being.

— Third party (74%), Model (70%) and Digital Distribution (78%) are the three risks where organizations are relatively more lagging and see the biggest potential opportunities for improvement.

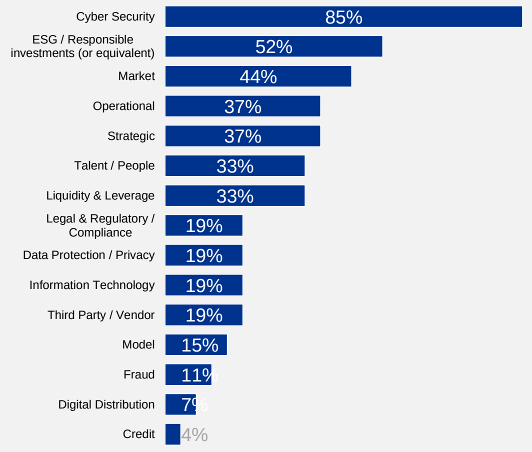
Risk Classes and Maturity

Q: How mature is your organization in managing each of the following risks?
(see detailed chart in Appendix)



Top risk classes with growing focus

Q: What are the top 5 risks that warrant growing focus from Management and/or the Board?
(see detailed chart in Appendix)



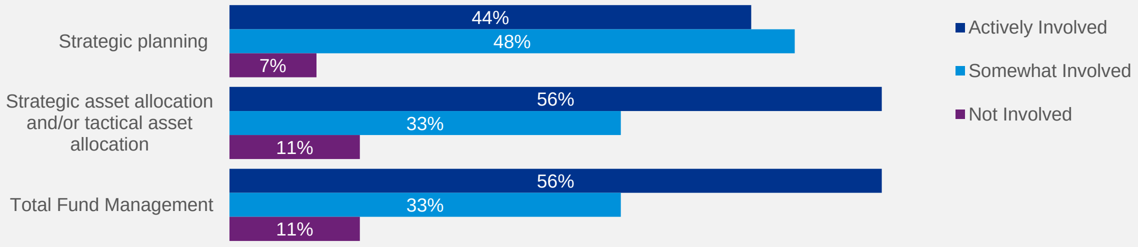
Source: 2021 global pension and sovereign funds risk management survey, KPMG in Canada, 2021.

Risk integration at the top of the house

Board and Management are leveraging the risk function to inform key strategic and business decisions across the organization and subsidiaries/ investment platforms by providing consistent forward-looking risk data using risk quantification tools (e.g. enterprise risk assessments and stress testing/ scenario analysis)

Integration of the Risk Function in key business processes

Q: To what extent is the Risk Function involved in the following activities?

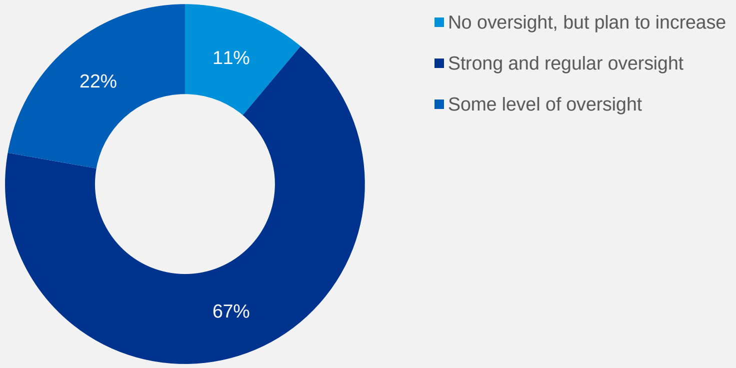


— Almost all organizations are actively or somewhat involving the risk function in the strategic planning process (92%), strategic/ tactical asset allocation (89%) and total fund management (89%). Yet, there is still room to boost the role of the risk function in key business and strategic process to provide the required risk insights on key transversal topics (e.g. liquidity and leverage management).

— In addition, the majority of organizations (67%) have strong and regular oversight over their subsidiaries and other investment platforms. Some organizations (33%) are also in the process of strengthening their oversight over their subsidiaries and investment vehicles to ensure standardized, continuous and scalable risk management practices throughout the organization.

Subsidiary/Investment Platform Oversight

Q: To what extent does your organization currently exercise oversight over its subsidiaries and other investment platforms / vehicles?

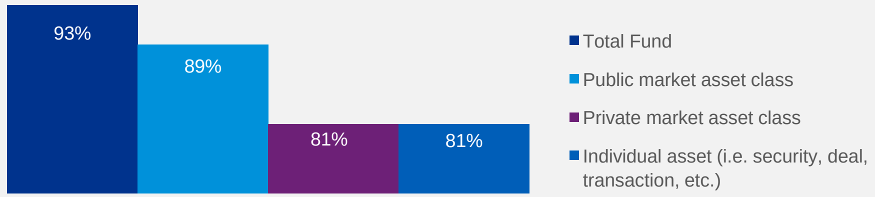


Source: 2021 global pension and sovereign funds risk management survey, KPMG in Canada, 2021.

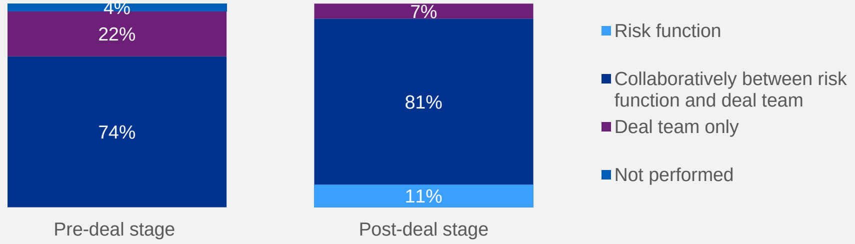
Risk integration at the total fund, asset class and deal levels

Integration of the Risk Function in Investment management

Q: Is risk measurement and monitoring being performed at the following levels of aggregation by the Risk Function?

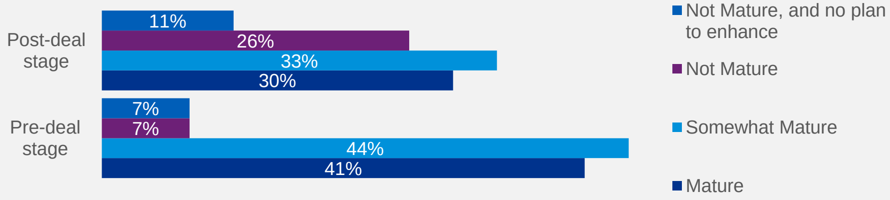


Q: Who is responsible for measuring and monitoring private market risks (pre and post deal)?



Maturity of non-investment risk evaluation/assessment

Q: To what extent are the non-investment risks independently evaluated throughout the deal cycle (or equivalent)?



Risk functions are involved in the wide-ranging investment management cycle, from total fund management down to the asset class and deal levels. Risk measurement and monitoring throughout the private deal cycle is still largely done collaboratively between the first and second LOD. Non-investment risks are also evaluated, with growing involvement and reviews from independent functions. In practice though, the modus operandi and extent to which the second LOD functions are exercising their independent challenge role may vary.

— Risk functions are commonly integrated in the core investment management activities, from the Total Fund Management (93%), asset class (89% and 81% for public and private market classes respectively), to the individual asset level (81%).

— For private market, the pre and post-deal risk measurement and monitoring activities are largely conducted through collaboration between the risk and deal teams (81% and 74% respectively). In practice, the extent of involvement and effective challenge performed by the risk function may range from ad-hoc deal reviews, material deals' review, to accessing risk data and/or exercising oversight through investment committees. Only a minority of organizations (11%) have the risk function independently perform such risk measurement and monitoring activities post-deal.

— The large majority of organizations (85%) are establishing independent reviews of non-investment risk assessments conducted pre-deal. Whilst more can still be done, non-investment risk factors, such as Cyber-Security, Legal, Regulatory, ESG or Financial Crime, are increasingly considered given their potential impact on the underlying investment/ deals. In practice, such independent evaluations may be conducted by the risk function, other relevant second LOD functions (e.g. Legal and Compliance) and/ or through investment committees.

— Organizations (63%), however, are relatively less mature in embedding independent and continuous non-investment risk reviews post-deal, which in practice, may be performed directly by the investment/ deal team.

Source: 2021 global pension and sovereign funds risk management survey, KPMG in Canada, 2021.

The risk function tool-kit

The risk function toolkit for non-investment risks is still largely a work-in-progress. The good news is that most organizations are in the process or planning to sharpen and expand their risk management toolkit and activities to generate additional risk insights. The central management of transversal risks such as currency, liquidity and leverage is a standard practice at the total fund level, whilst organizations are further formalizing the measurement and monitoring of country risks as a distinct risk class.

— Organizations are still largely ramping-up their toolkit to manage non-investment risks. Overall, the priority has been to first set the core or foundational pillars of their operational risk management programs such as the Risk and Control Self-assessments (56%) and Operational Risk Incident Management (48%). A large proportion of the organizations are still in the refining or planning stage (40% and 48% respectively). In practice, we observe that organizations are leveraging tools and techniques used in the broader financial industry, whilst continuously improving, tailoring and right-sizing them to their business needs and environment.

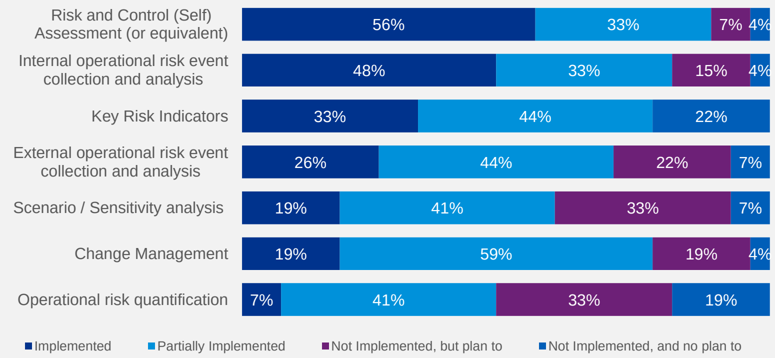
— Most organizations are at early stage of development of more advanced risk management tools. The large majority have however partially implemented or planning to further adopt these tools, such as integrating risk in change management initiatives (78%), operational risk quantification (74%), scenario analysis (74%), key risk indicators (44%) and external operational risk event collection (66%). As it matures, the risk function is expanding its role to share additional risk data and insights to the business, help evaluate the resilience of organizations to extreme stress events and ultimately help ensure risks of and to large organizational initiatives are adequately managed.

— A large majority of organizations have a centralized oversight model to manage liquidity and leverage (85%) and currency risks (78%) to support an enterprise-wide assessment of these risks, which is commonly observed as a standard practice.

— As organizations expand and invest across various geographies and emerging markets, they recognize that the key risk drivers are increasingly 'country-based'. 37% of the organizations have already established a formal framework to measure and monitor country risks as a distinct risk, whilst 33% plan to do so.

Implementation of Non-Investment risk management tools

Q: To what extent have you adopted the following tools and/or processes for the identification, measurement and/or management of non-investment risks?



Investment risk assessment

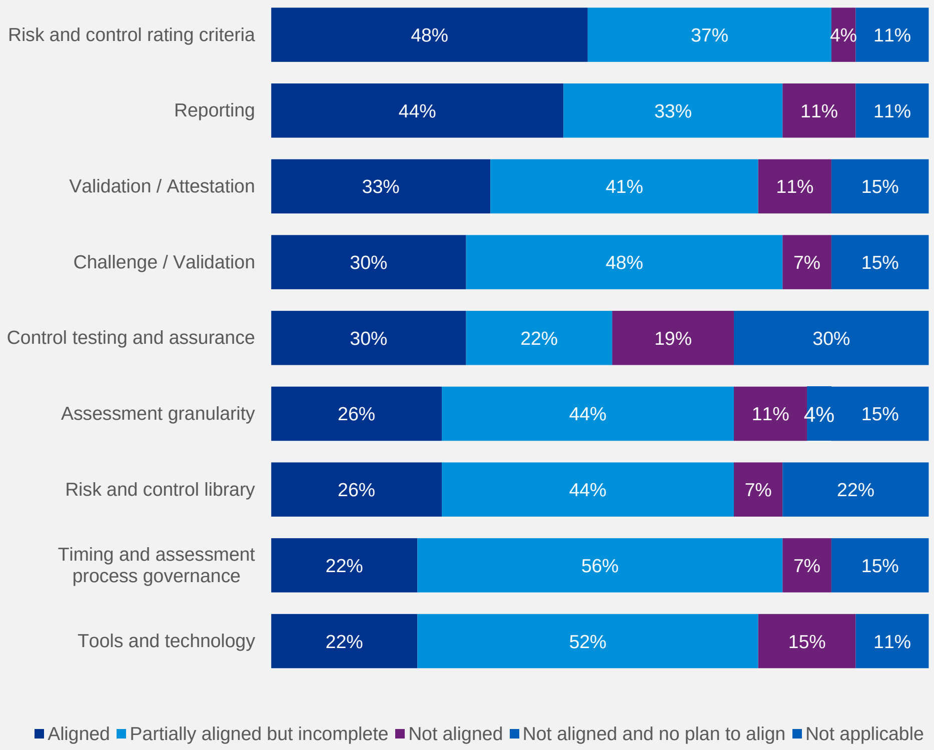
Q: With respect to specific investment risks, please select the best answer for the following questions:

Source: 2021 global pension and sovereign funds risk management survey, KPMG in Canada, 2021.

Risk and control languages

Alignment of risk assessment elements

Q: Select the appropriate level of alignment for the following elements of risk assessments across the various business functions



Organizations are in the midst of setting the common foundational pillars of their various risk and control programs in place. They are looking at ways to instill one enterprise-wide risk language that bridges all functions, avoids redundancies and/or inconsistent risk data. Convergence and connecting the dots between and within the LOD and synchronizing the design-to-delivery of these programs become critical to obtain a 'single source of truth' all the way up to the Board, and ultimately minimize the impact on the first LOD.

— Organizations are relatively more mature in institutionalizing their risk and control rating criteria (48%) and reporting (44%). Though overall, less than half have yet aligned the various risk assessments methodologies and components deployed throughout their risk and control programs in place, such as Enterprise Risk Management, Information Security, Internal Audit or Compliance. Whilst the success of any collaboration starts with people, organizations must further break silos and establish consistent methodologies to define, evaluate, measure and report on risk and control activities and performance.

— Technology remains the less mature element (22%) with organizations still using standalone and fragmented technologies or tools to support their various programs. In practice, organizations need to first define their overall risk and control architecture (e.g. risk and control libraries, risk criteria, business hierarchy).

— Overall, the second and third LOD are moving towards a more 'combined or collective assurance' approach with objective to better coordinate their respective risk and control programs from design-to-delivery by focusing on materiality, possible synergies, such as functional, process or technology, and points of integration, and ultimately helping to minimize the impact on the first LOD.

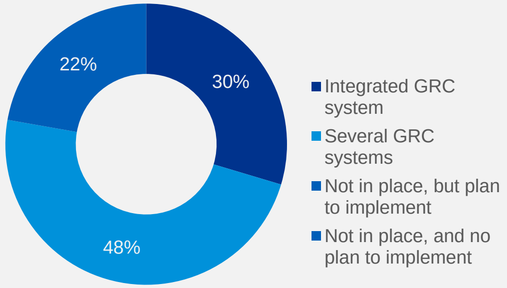
Source: 2021 global pension and sovereign funds risk management survey, KPMG in Canada, 2021.

Interpreting the data

There is a significant shift across the industry as organizations are creating integrated data platforms to support data-driven decisions. In order to provide real-time advice, greater predictive insight and visibility of risks for senior management the second LOD is reviewing the comprehensiveness, availability and integrity of these data points. The second LOD is also augmenting their data governance processes to ensure data integrity and fully unlock the value of data during the data transformation

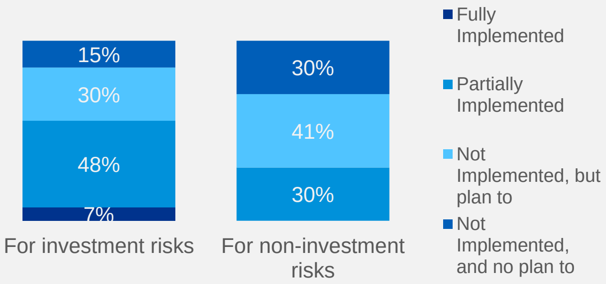
Adoption of GRC System

Q: What is the level of Governance, Risk and Compliance (GRC) adoption in your organization?



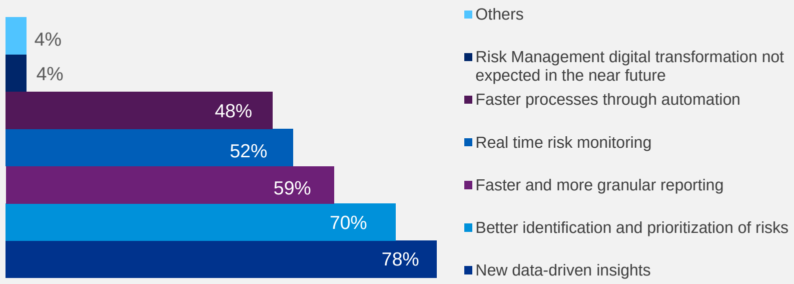
DA/AI in risk management

Q: To what extent do you apply data analytics and/or Artificial Intelligence in risk management activities?



Value of risk management digital transformation

Q: What results do you hope to achieve from risk management digital transformations in the near future (1 to 2 years)? Select all that apply



- A large majority of organizations (70%) do not have an integrated GRC system consequently impacting the organizations ability to obtain a holistic view of risk data points and interaction between different risk types. In practice, while GRC systems can reduce the lead-time to identify and report risks; they also enhance the operational efficiency by enabling standardized risk practice and combined assurance across different second LOD functions
- Some organizations (48%) have implemented several siloed systems and can advance their risk analytics capabilities by ensuring that data is shared, integrated and universally used across each of these siloed GRC systems.
- Organizations still have lower maturity in applying data analytics/ artificial intelligence (AI) as part of the risk management practices. A large majority of organizations (70% – 80%) have either partially implemented or plan to implement data analytics and/or artificial intelligence for investment and non-investment risks.
- Organizations see significant potential of leveraging data analytics across investment risks (e.g. credit rating, stress testing), non-investment risks (cyber, fraud analytics, third party due diligence) or interaction between risks across investment and non-investment risk categories.
- Organizations will continue to progress in their digital transformation journey to obtain data-driven risk insights (78%), better identification and prioritization of risks (70%) and derive faster and more granular reporting (59%).

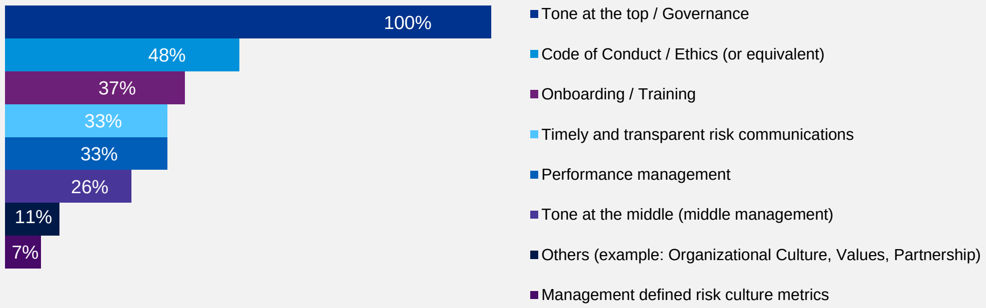
Source: 2021 global pension and sovereign funds risk management survey, KPMG in Canada, 2021.

The human 'risk' factor

Risk culture is defined as the *"System of common values and behaviors that shapes risk decisions in an organization".* It is result of the combination of both the hardware (e.g. policies, procedures, charters, KPIs) and software (e.g. attitudes, beliefs and values). Whilst a sound hardware is necessary, experience demonstrates that the "Human Factor" is often the key disrupter in setting an effective risk culture. Although organizations are adopting a wide range of components to develop and ultimately define risk culture, 'Tone at the Top / Governance' remains unanimously the most powerful ingredient to a robust risk culture.

Components of Risk Culture

Q: What are the top three (3) risk culture components in your organization?



— Software is key! All organizations (100%) have indicated that 'Tone at the Top / Governance' is the #1 attribute of risk culture. While culture can be grown organically from its people, leadership have a critical role to play in shaping the 'Character of the Organization': setting the vision, values and expected tangible practices to implement its values, amongst which positioning risk management at the core of the organization's ideology and every aspect of the business

— A wide range of other strategies, such as the Code of Conduct / Ethics (48%) or rolling out training and education sessions (37%), are employed to further instill risk management across the organization and drive the expected behaviors, actions, interactions and risk outcomes.

Eight Pillars of Risk Culture

— An organization's risk culture may not be formally articulated or documented but can be observed through the behaviors and priorities of its employees. Only a few organizations are using more formal metrics (7%) to define and continuously measure risk culture. In practice, organizations may also use other methods to evaluate risk culture such as self-reports, changes in observations from Internal Audit, alignment between stakeholders and other behavioral assessments (e.g. say-do gaps, competing objectives, governance gaps and fault lines, micro-cultures).

Source: 2021 global pension and sovereign funds risk management survey, KPMG in Canada, 2021.

Conclusion

The Survey analysis reveals that risk management is becoming a strategic and business priority across global pension and sovereign funds. The risk function should not be restricted to a simple 'middle or back office' role, and is progressively repositioned and empowered to make a difference and help the organization become collectively 'more risk confident.

In addition to setting the necessary structure and forums to better link risk management to performance management, organizations are adapting their risk management practices across investment and non-investment risks to remain relevant and resilient in this dynamic operating environment. Organizations have built their risk management foundations with clearly defined risk governance and oversight, elevating and expanding the mandate of the risk function, and further formalizing and integrating risk management processes and activities at the heart of the business: strategic planning, portfolio management and deals (individual and portfolio levels). In turn, they demonstrate confidence and maturity in managing specific risk classes such as investment (e.g. market, credit, liquidity) and legal and regulatory risks.

Looking ahead, and despite significant progress made, organizations will likely need to further develop their non-investment risk management related capabilities, such as operational or ESG risks, and create greater convergence and synergies between various risk-related programs in place across the three lines of defense. Investing in technology and data analytics capabilities will also help generate better insights and efficiencies, and enable real-time monitoring and reporting to further support decision-making.

Risk management is a journey that requires organizations to remain agile, innovative and willing to improve.
The direction and outlook seems very promising, and there is expected to be progress in the coming years.

Appendix

Appendix 1 Methodology and background

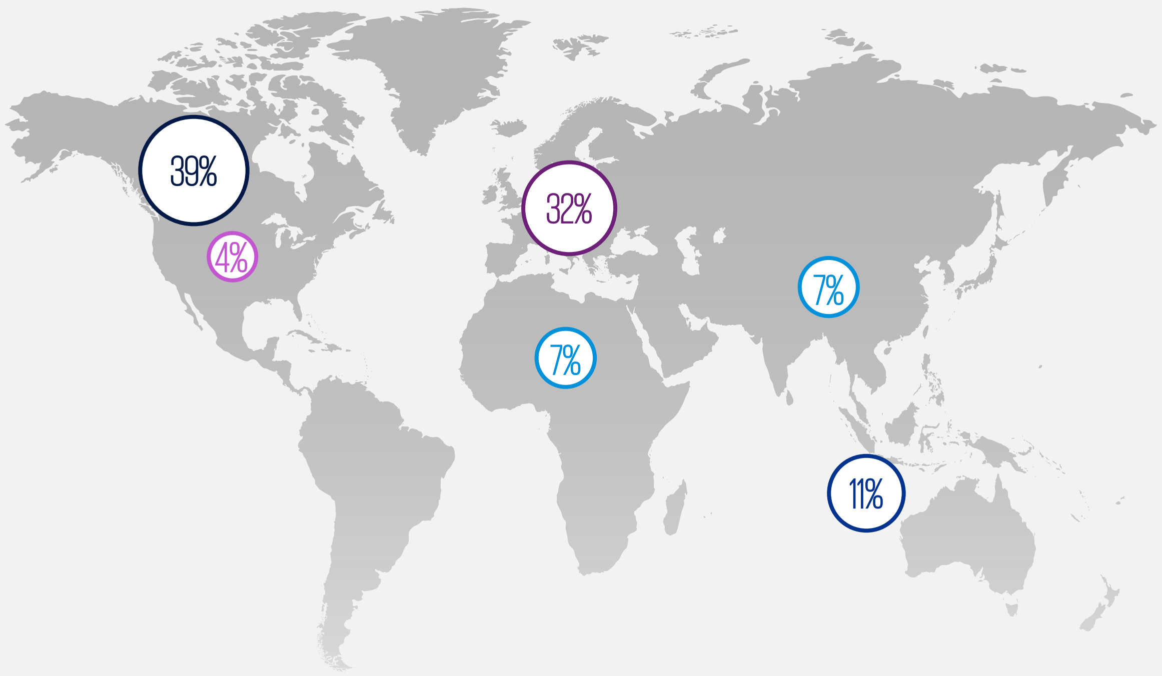
The Survey covered the key pillars of an effective risk management practice:

- **Risk Oversights and Governance Structure** - inquired about the establishment and constitution of dedicated Board and Management Risk committees and to what extent they exercise oversight over all risk categories (investment and non-investment) as well as their maturity in managing specific risks within these categories;
- **Risk Appetite** – inquired about the maturity of investment and non-investment risk appetite statement and metrics and the extent to which they are operationalized across the organization;
- **Risk Assessment, Measurement and Management** – inquired about the extent to which the Risk Function is involved in the overall strategic planning process, strategic asset allocation, and total fund management. This section also inquired about the levels of aggregation for risk measurement and monitoring, and the level of implementation of non-investment risk management tools; and
- **Risk Reporting** – inquired about the overall maturity and focus of the risk reporting framework for investment and non-investment risks including frequency of reporting, and the implementation of a Governance Risk and Compliance (GRC) system.

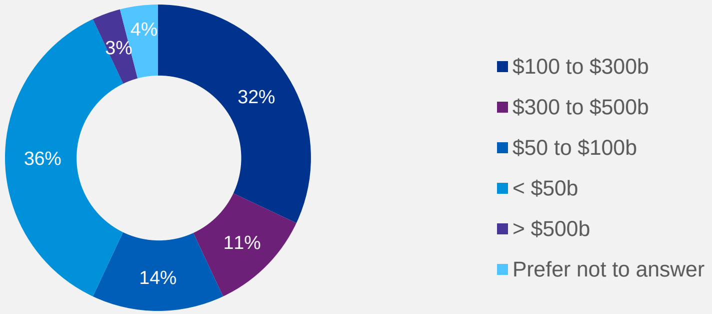
Respondents were categorized by asset size, with 46% of respondents at or above $100 billion in AUM and 54% below $100 billion in AUM.

The survey consisted of 36 multiple choice and open-ended questions that were carefully selected and aimed at driving both qualitative and quantitative responses around the participants' Risk Management practices and program maturity.

Geographical distribution of respondents



Assets Under Management (AUM) of respondents



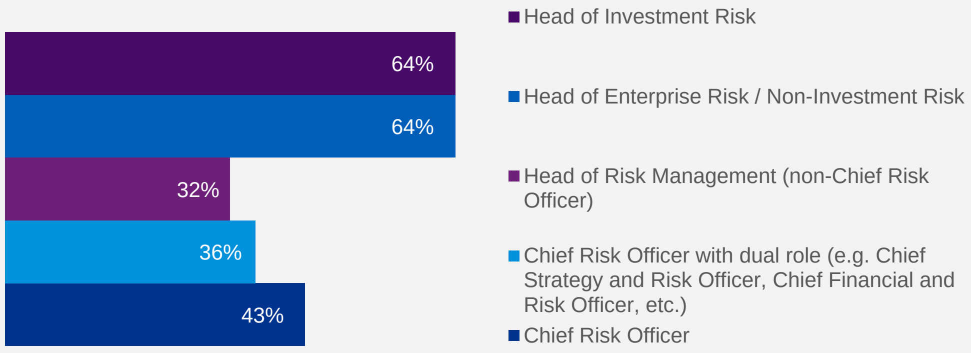
Source: 2021 global pension and sovereign funds risk management survey, KPMG in Canada, 2021.

Appendix 2a Further insights into the findings

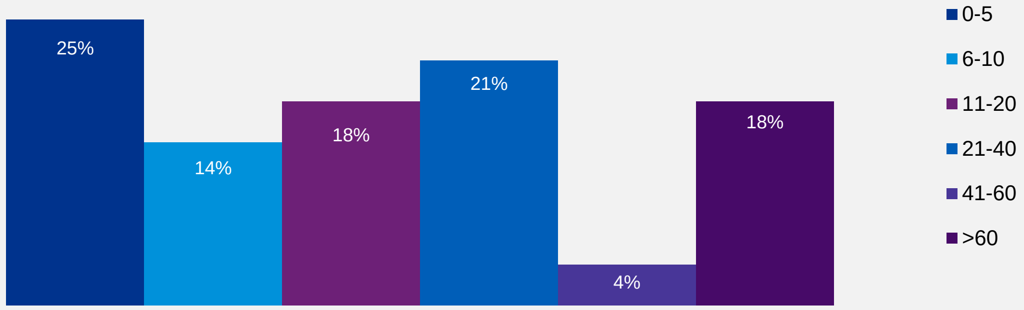
Risk Management Structure

Q: What is the current structure of your organization's Risk Function (or equivalent)?

Q: Which of the following roles exist in your organization? Please select all that apply



Q: How many full time employees ("FTEs") do you have in your Risk Function (inclusive of both investment and non-investment risk management functions)?

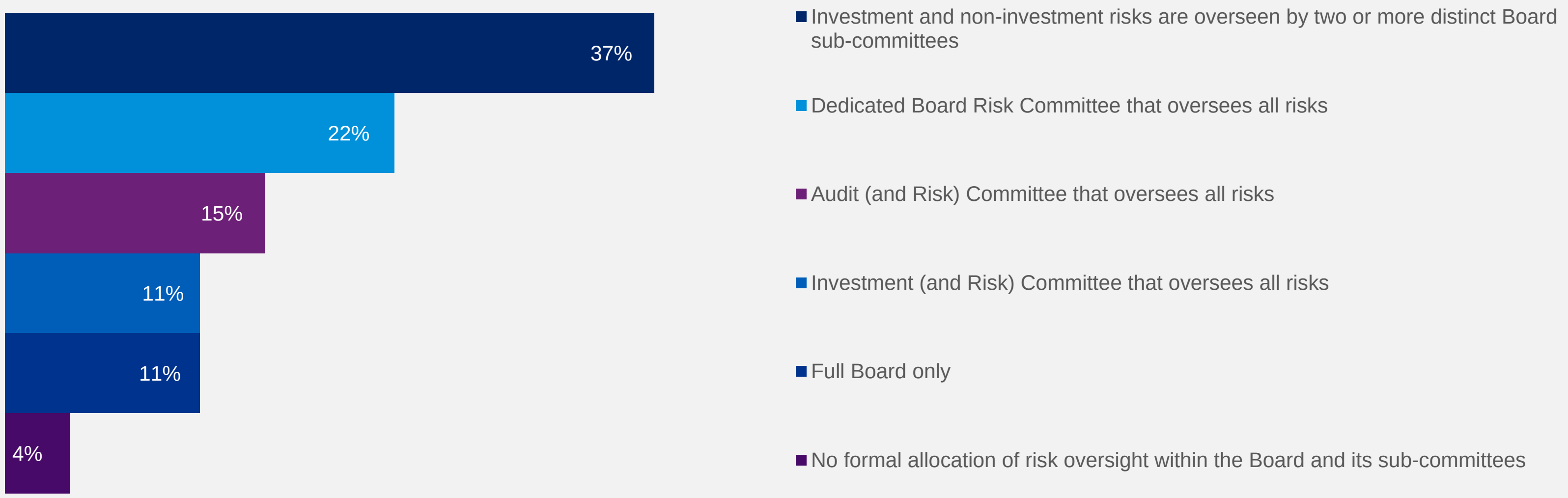


Source: 2021 global pension and sovereign funds risk management survey, KPMG in Canada, 2021.

Appendix 2b Further insights into the findings (continued)

Board Risk Oversight

Q: Which Board (sub) committee has dedicated oversight over risk management?

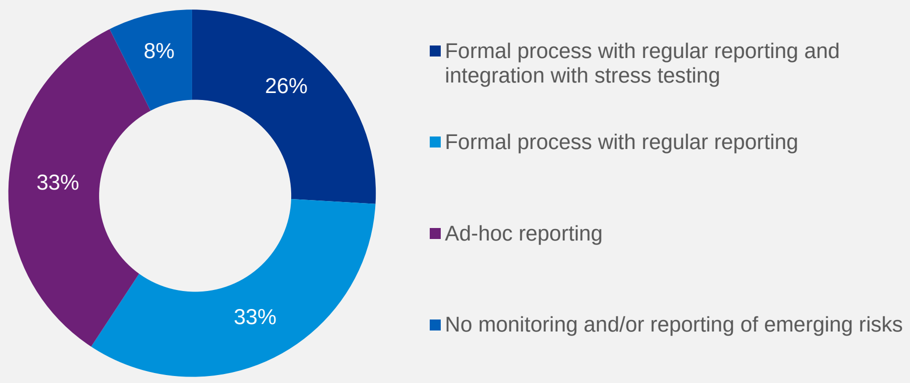


Source: 2021 global pension and sovereign funds risk management survey, KPMG in Canada, 2021.

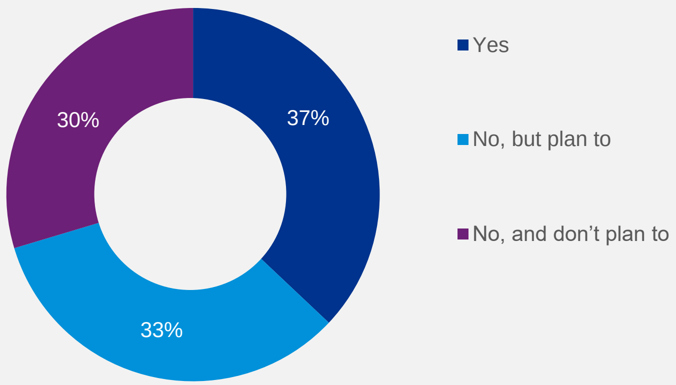
Appendix 2c Further insights into the findings (continued)

Risk Management Practices

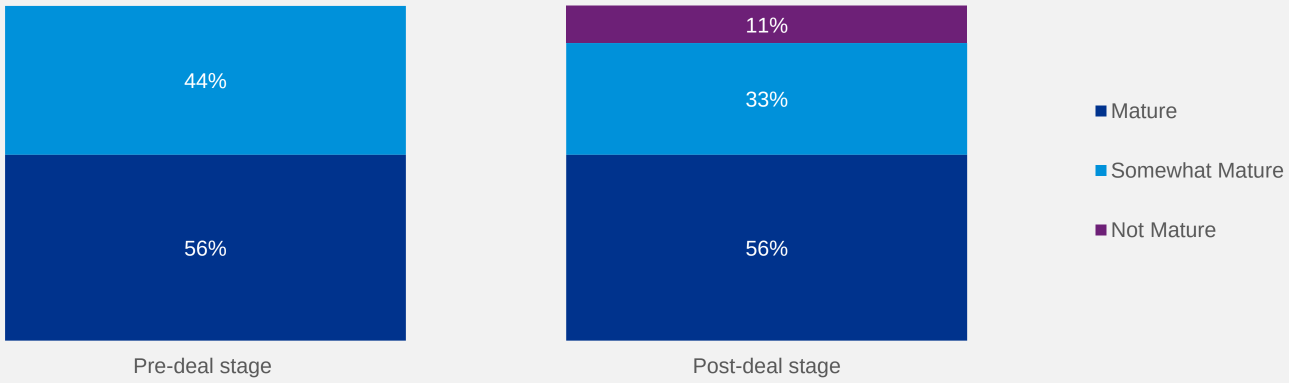
Q: With respect to emerging risks, please select the option that best suits your organization.



Q: Does your organization measure and monitor country risk as a distinct risk?.



Q: To what extent are the investment risks independently evaluated throughout the deal cycle (or equivalent)?

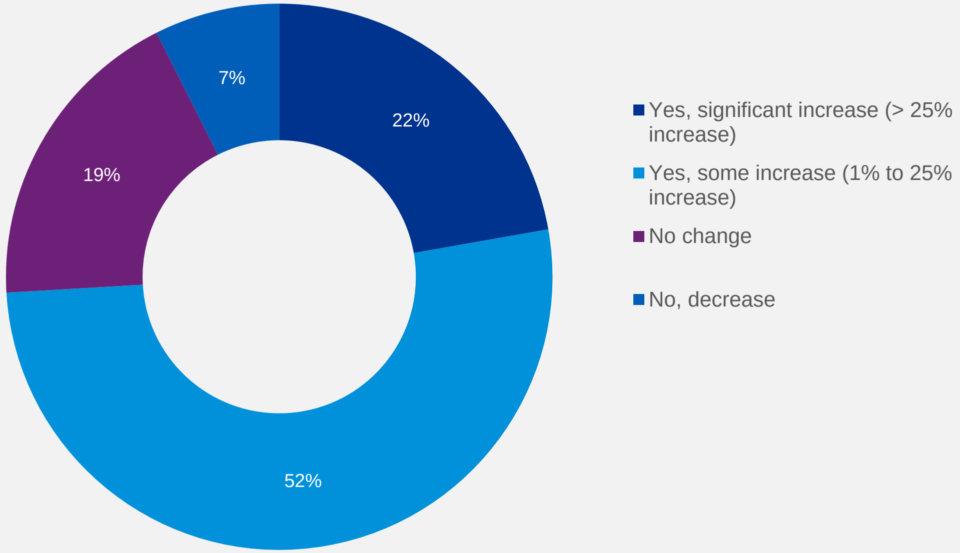


Source: 2021 global pension and sovereign funds risk management survey, KPMG in Canada, 2021.

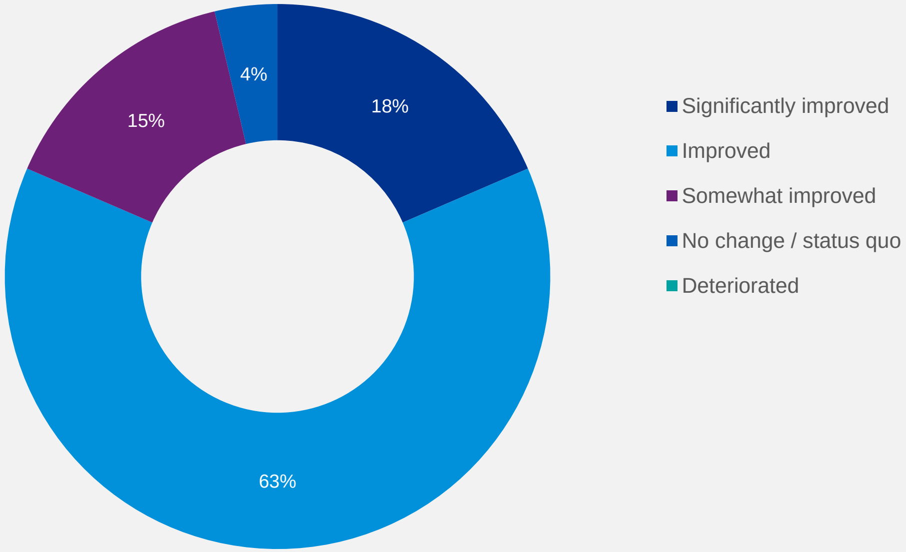
Appendix 2d Further insights into the findings (continued)

Enhancements to Risk Management

Q: Do you expect an increase in investments (financial, headcounts etc.) in your Risk Function in the next 1 to 3 years versus the past 3 years?



Q: Over the past 3 years, how has your organization's ability to manage non-investment risks changed?

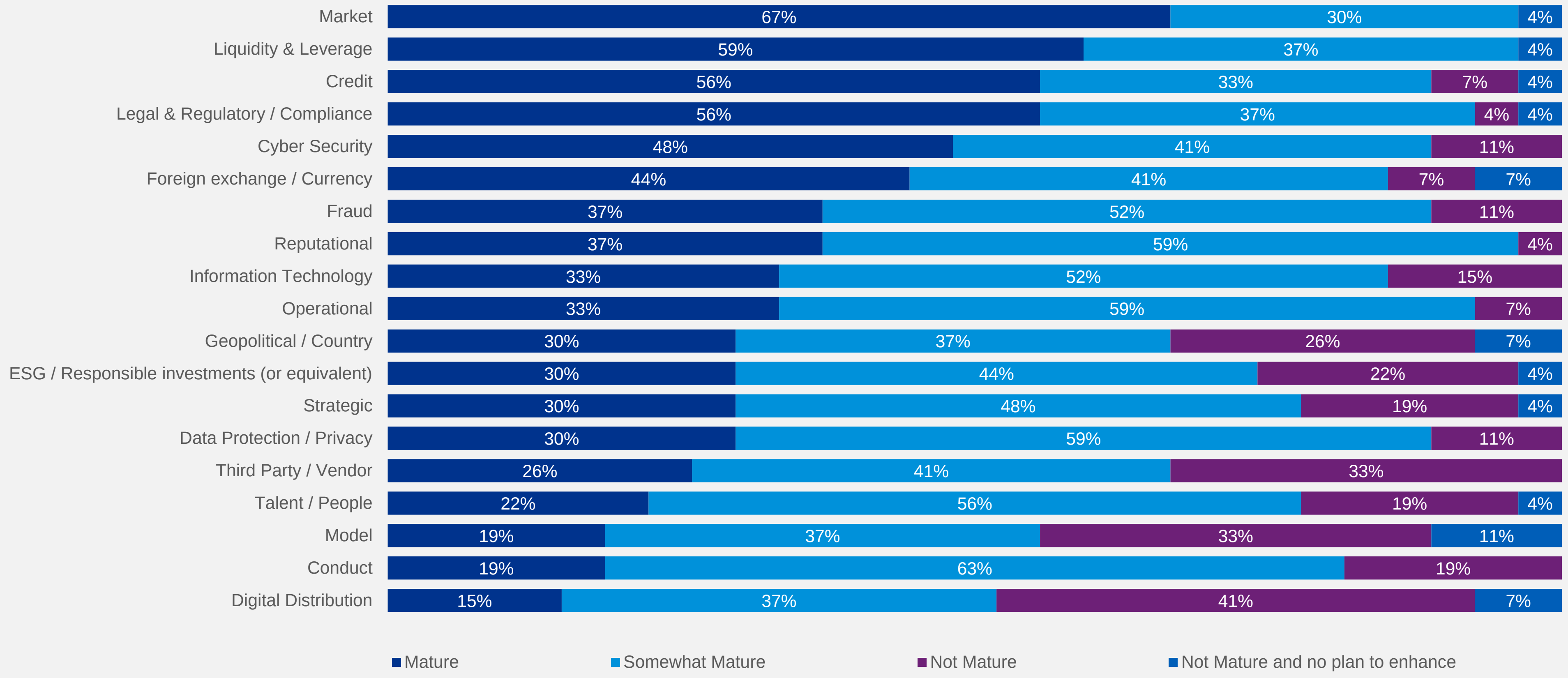


Source: 2021 global pension and sovereign funds risk management survey, KPMG in Canada, 2021.

Appendix 2e Further insights into the findings (continued)

Risk Classes and Maturity

Q: How mature is your organization in managing each of the following risks?

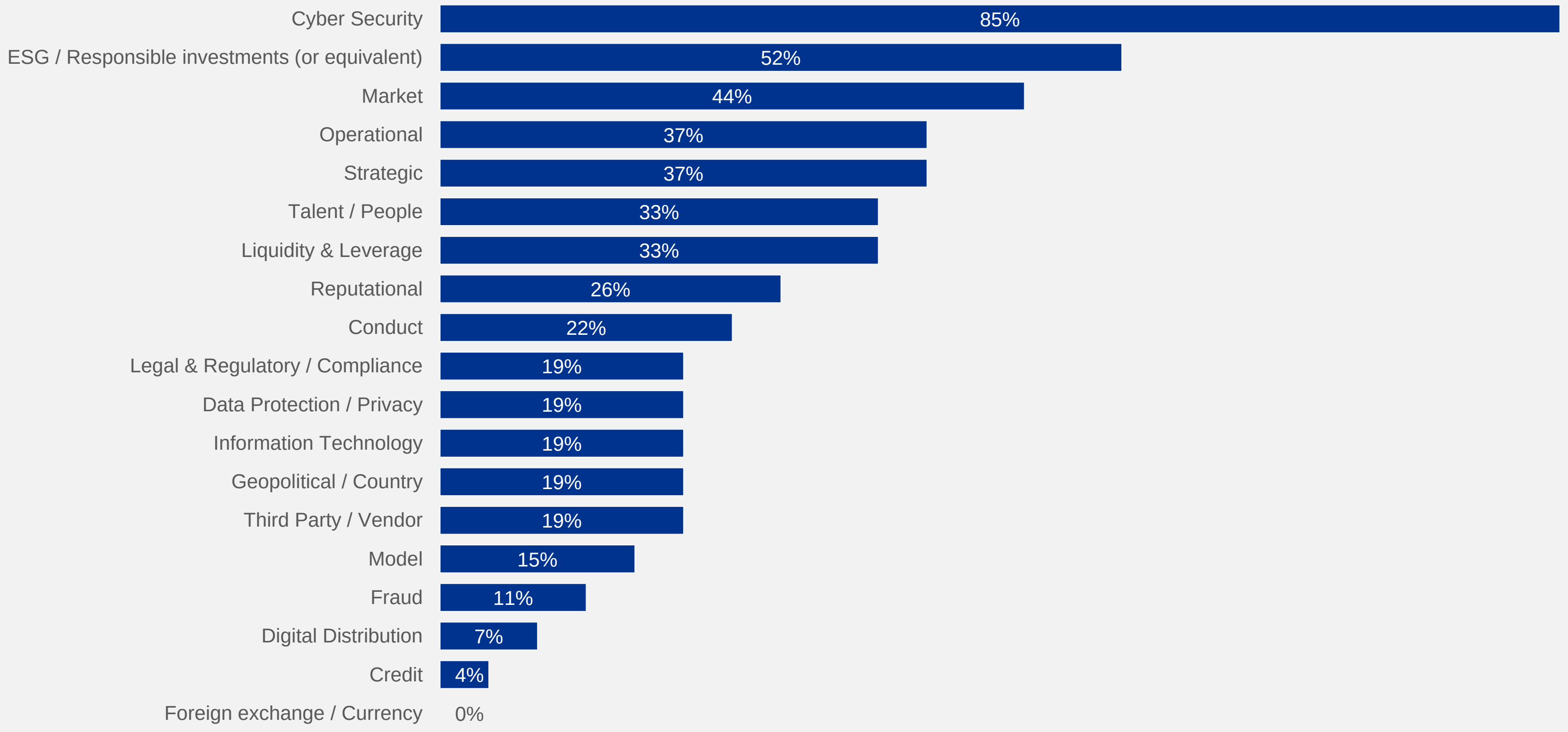


Source: 2021 global pension and sovereign funds risk management survey, KPMG in Canada, 2021.

Appendix 2f Further insights into the findings (continued)

Risk Classes and Maturity

Q: What are the top 5 risks that warrant growing focus from Management and/or the Board?



Source: 2021 global pension and sovereign funds risk management survey, KPMG in Canada, 2021.

Contacts

Andrew Weir

Global Chair, Asset Management and Real Estate, KPMG International; Regional Senior Partner and Vice Chairman KPMG Advisory (China) Limited

T +852 2826 7243

andrew.weir@kpmg.com

John Cho

Partner and National Leader, Deal Advisory; Global Institutional Investors Group Lead, KPMG in Canada

T +1 416 777 3994

johncho@kpmg.ca

Edouard Bertin-Mourot

Partner, National Leader for Enterprise Risk Management, KPMG in Canada

T +1 416 777 3511

edouardbertinmourot@kpmg.ca

Mohamed Mokhtari

Partner, National Leader for Financial Risk Management, KPMG in Canada

T 1+ 514 940 7573

mmokhtari@kpmg.ca

Sandeep Dani

Vice President, Enterprise and Operational Risk – Financial Services, KPMG in Canada

T 1+ 647 777 5173

sandeepdani@kpmg.ca

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