International Association of Insurance Supervisors

Financial Stability Institute | BIS

FSI Insights
on policy implementation
No 72
The next generation of insurance supervision – resourcing the future

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February 2026

JEL classification: G28

Keywords: insurance supervision, resource management

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Authorised by the Chair of the FSI, Fernando Restoy and the Chair of the IAIS Executive Committee, Toshiyuki Miyoshi.

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ISSN 2522-249X (online)
ISBN 978-92-9259-924-9 (online)

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Executive summary

Insurance supervisory resources are fundamental to enable supervisors to fulfil their mandates effectively and to respond to a changing supervisory and insurance market landscape. Yet adequate resourcing of insurance authorities and cost efficiency are becoming more challenging given regulatory reforms underway, technological advancements and broader macroeconomic, geopolitical and demographic trends. Furthermore, as budgetary discipline faces greater scrutiny and expectations for accountability rise, pressures to promote competitiveness and reduce compliance costs further challenge insurance supervisors to balance resource constraints with effective oversight, making the efficient management of supervisory resources increasingly critical.

The Insurance Core Principles (ICPs) call for supervisors to be adequately resourced, encompassing human, financial and technological resources, to effectively deliver on their mandates. Supervisors should have adequately skilled personnel as well as enough financial and technological resources to perform their functions effectively. As these resources are interconnected, they need to be managed holistically, tailored to each jurisdictional circumstances, considering factors such as institutional arrangements, supervisory mandates, the size of the insurance industry, market development levels and stages of supervisory development.

Based on a survey of 23 insurance supervisors covering different geographies and economies, supervisors face challenges commonly encountered by public sector entities. Factors such as less competitive remuneration vis-à-vis the private sector, linkage of pay scales to public sector rules, rigid hiring processes and budget constraints limit supervisory authorities' ability to attract and retain skilled personnel. The link to public sector rules can be a challenge for both authorities that are fully funded independently and those reliant on public funding. In certain jurisdictions, the resource challenge is further exacerbated by high turnover rates, difficulties in recruiting younger replacements for an ageing workforce and the diversion of already stretched resources from core activities to address new or expanding mandates as well as unexpected surges in resource needs in times of crises or unexpected disruptions.

Supervisors also face challenges in securing adequate and stable funding. This can significantly hinder their ability to fulfil their core responsibilities. Budgetary constraints may limit supervisors' capacity to invest in information technology (IT), build capacity or address emerging risks. Constrained financial resources can also limit authorities' ability to address the aforementioned human resource challenges, including the potential need to source additional expertise to deal with unexpected disruptions in insurers or the insurance market.

A sound resource management approach, involving clear identification of resource needs and effective allocation across supervisory activities, is essential to address these challenges. Most surveyed authorities identify financial resource needs through their annual budgeting process, guided by institutional priorities, with some adopting multi-year budget planning. Supervisory resource needs may additionally be informed by insurers' risk ratings or scenario analysis as well as by gaps between supervisory and industry skills. Furthermore, market development and regulatory reforms – such as the

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transition to risk-based supervision or International Financial Reporting Standard (IFRS) 17 implementation – require careful identification of both human and financial resources, including for investments in training, data systems and supervisory technology (suptech) tools.

The sources of funding for insurance supervisors vary across jurisdictions. Most rely primarily on industry fees and levies as their main funding sources. Authorities that are part of central banks are typically funded by them, while a small number of surveyed authorities rely on investment income from excess funds. Budgets are often approved by the government and, in some jurisdictions, include consultations with industry representatives and supervisory boards, as well as reporting on discharge of duties.

Stability and predictability of income, as well as flexibility to scale resources or access supplementary funding, are essential to enable authorities to conduct forward-looking, multi-year planning of core activities and respond to unexpected challenges. Certain authorities adopting a full cost recovery funding approach, aiming to recoup their operational expenses from the industry, may reduce their reliance on government funding. Such an approach may support supervisory independence in some jurisdictions, depending on each jurisdictions' legal structure or market conditions. In addition, by aligning funding mechanisms with a risk-based supervisory approach, authorities can allocate resources proportionately to the level of risk and complexity posed by supervised entities.

Reliance on external expertise needs to be carefully considered, given the trade-offs. While external experts can plug the skills gaps of insurance authorities or meet unexpected resource needs, especially in emerging markets and developing economies (EMDEs), overreliance on such experts may result in loss of institutional knowledge. To mitigate this risk, arrangements to transfer knowledge to internal staff are critical, for example, placing external consultants under the direct supervision of a supervisory staff.

Given potential competing priorities and limited resources, a clear mandate is essential for guiding resource allocation. Over the next three years, most surveyed authorities anticipate an increased need for both human and financial resources, requiring them to prioritise resource allocation based on the cost-benefit analysis of supervisory activities. Like any public sector entity, aligning resource allocation with core mandates is critical for accountability and transparency, enabling stakeholders to understand how resources are being utilised. At the same time, there is an increasing expectation to avoid overburdening the industry or stifling innovation. In this context, aligning resource allocation with core mandates becomes even more critical to ensure that supervisory activities remain focused on their primary objectives, such as maintaining the safety and soundness of insurers and the insurance market, safeguarding financial stability and protecting policyholders.

As technology and market dynamics continue to reshape the insurance sector, proactive investment in both human and technological capabilities will be essential to keep pace with these changes. Regularly assessing and anticipating evolving supervisory resource needs will enable authorities to stay ahead of emerging challenges and opportunities. Central to this forward-looking approach is a strong emphasis on maintaining cost efficiency and securing adequate financial resources to transform supervisory frameworks for the future. Without sufficient and well-managed funding, skilled personnel and advanced tools, even the most robust regulatory frameworks risk falling short in practice. By embracing innovation and prioritising resource optimisation, insurance supervisors can ensure they are well equipped to safeguard financial stability, protect policyholders and support a resilient and competitive insurance sector in the years to come.

Section 1 – Introduction

1. **The evolution of insurance supervision[2] continues to be shaped by changes in supervisory approaches, expanding mandates, technological advancements and dynamic developments in the insurance market.** In many jurisdictions, insurance supervision is transitioning or has transitioned from compliance-based to risk-based approaches, requiring significant financial resources, new skillsets and a supervisory culture shift to exercise sound judgment. At the same time, supervisory mandates are expanding to cover areas such as climate-related risks, financial sector development, digital innovation and other objectives.[3] In parallel, rapid technological developments, especially artificial intelligence (AI), are transforming the insurance sector, amplifying exposure to risks and at the same time presenting opportunities for improved efficiency. Supervisors too are being impacted by technology, opening possibilities to transform and digitalise supervisory processes. Overarchingly, the insurance market is being shaped by various forces, ranging from macroeconomic and geopolitical developments to demographic and technological trends – all of which are affecting insurers, necessitating adjustments in supervisory oversight.

2. **Against this backdrop, insurance supervisory resources are critical to cope with these drivers of change.** Supervisory resources are the fundamental elements that enable supervisory authorities to fulfil their responsibilities effectively. Without adequate resources (both in terms of quantity and quality) and proper resource management, supervisory gaps may emerge, potentially resulting in lapses in the timely identification of any supervisory issues within insurers. Supervisors need to have strong human capacity to monitor solvency, governance and conduct in insurers. For example, the shifts of insurers' investments to more complex asset classes necessitates supervisory staff with specialist capital market expertise.[4] Yet a recurring theme in the International Monetary Fund (IMF) Financial Sector Assessment Program (FSAP) assessments and the International Association of Insurance Supervisors' (IAIS) implementation assessment activities[5] is that insurance supervisors continue to lack suitably skilled staff, which hinders their ability to deliver on their various mandates as well as to respond to cross-sectoral developments and trends such as climate-related risks, increased digital innovation and cyber risks.[6]

3. **The IAIS Insurance Core Principles (ICPs) call for supervisors to follow a holistic approach in managing supervisory resources, covering three key elements – human, financial and technological resources**. Having sufficient and well-managed financial resources is critical for authorities to attract and retain suitably qualified staff, access relevant IT tools, execute supervisory functions and maintain their day-to-day operations. Human resources are arguably the most important element, as staff members of supervisory authorities are the ones enabling authorities to fulfil their mandates. Technology has become an indispensable element of resources, enabling improved efficiency and productivity, as well as providing new capabilities for enhanced supervisory oversight. It is important to note that these elements are interlinked, and the needs of each may fluctuate over time and therefore require continuous

[2] See IAIS (2024). The term "supervision" is used to refer to both supervision and regulation. Similarly, the term "supervisor" also refers to "regulator".

[3] ICP 1.2 identifies policyholder protection, maintenance of fair (conduct objective), safe and stable insurance markets (prudential objective) and contributing to financial stability (macroprudential objective) as the core supervisory mandates. It also recognises that supervisory objectives and their respective priorities may vary by jurisdiction, and that some supervisors may have additional supervisory objectives, such as "promoting insurance market development, financial inclusion, financial consumer education". See IAIS (2024).

[4] See IMF (2025b).

[5] The IAIS's implementation assessment programme evaluates observance of the ICPs and the Common Framework for the Supervision of Internationally Active Insurance Groups (ComFrame) through peer reviews, in-depth member assessments, targeted jurisdictional assessments and a self-assessment tool.

[6] See IAIS (2019). A peer review process conducted across 72 authorities, revealed that in relation to ICP 2.11, those supervisory resources, both financial and staff, are not, or only in some cases, sufficient for effective supervision.

monitoring for adjustments. Supervisory resource needs vary from jurisdiction to jurisdiction, depending on a range of factors such as the institutional arrangement, supervisory mandates, size of the insurance industry, level of market development, stage of supervisory development, among others. Box 1 provides a summary of the ICPs covering these elements of supervisory resources.

Box 1

The components of supervisory resources

The IAIS Insurance Core Principles (ICPs) emphasise the critical role of supervisory resources in supporting operational independence, accountability and transparency in the exercise of a supervisor's responsibilities and powers in insurance supervision. ICP 2.10 calls for a supervisor to have sufficient resources, including human, technological and financial resources, to enable it to conduct effective supervision.

Human resources

Supervisory authorities should have access to a sufficient number of skilled personnel to effectively carry out their responsibilities.

Financial resources

A supervisory authority's financial resources should enable the supervisor to finance essential activities, including staffing, technology acquisition and training.

Technological resources

The ICP also recognises the importance of technological resources in enabling authorities to perform their functions effectively. Technological resources require upfront human and financial resources to acquire and operationalise them and can enhance the efficiency and effectiveness of supervision, potentially optimising human resources in the long run.

4. **Supervisory resourcing is a topic that is gaining greater attention**. As budgetary discipline comes under greater scrutiny and expectations for accountability rise, the efficient use of supervisory resources is becoming increasingly critical. This creates a challenging dynamic, as finite or, in some cases, shrinking resources must be stretched to meet the growing demands driven by the evolving mandates and market complexities. At the same time, the increasing focus on promoting competitiveness, innovation and growth in the financial sector may create pressure to lower compliance costs and improve efficiency by simplifying regulatory requirements and supervisory processes. While not a primary objective of insurance supervisors, employing appropriate staff and technological tools can, to a certain extent, contribute to this effort.

5. **The purpose of this paper is to examine how supervisors identify and allocate human and financial resources, the sufficiency of these resources in meeting current and future demands, and the strategies to allocate them efficiently.** The analysis is informed by a survey conducted among 23[7] insurance supervisors for the 2023 financial year – this time frame was chosen for data comparability, considering the varying publication dates of financial data by insurance supervisors and relevant publicly available documents.[8] While the paper primarily focuses on human and financial resources, technological resources are also considered along these two dimensions. Section 2 explores the challenges faced by the supervisors, section 3 explains how the surveyed authorities identify resource needs, section 4 outlines the sources of funding and human resources, section 5 discusses approaches to resource allocation and section 6 concludes.

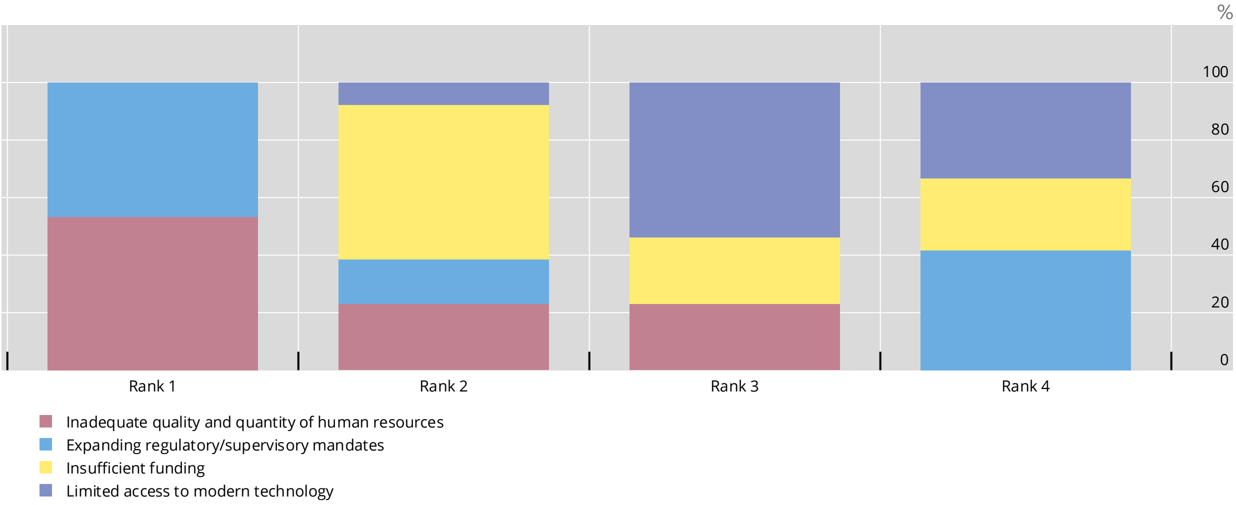
Section 2 - Challenges

6. **Insurance supervisors face a range of challenges in managing human and financial resources.** According to the surveyed authorities, the two main challenges are attracting and retaining an adequate quality and quantity of human resources and expanding regulatory and supervisory mandates. Insufficient funding is the next most pressing challenge. Though technology can be helpful to compensate for a lack of human resources, the lack of financial and human resources may limit the extent to which authorities are able to leverage technology to address resource gaps. These challenges are interrelated – for instance, limited funding can lead to uncompetitive salaries, causing difficulties in attracting skilled experts, which in turn can affect the supervisor's capacity to implement advanced supervisory technology. Graph 1 summarises the surveyed authorities' ranking of challenges. It shows the proportion of surveyed authorities' ranking of each type of challenge. Reading across the bars from Rank 1 to Rank 4 reveals which challenges are most frequently cited as top priorities and which are lower-priority concerns.

7 Insurance authorities that participated in the survey: the Australian Prudential Regulation Authority (APRA), Office of the Supervisor of Insurance and Private Pensions (OSIPPP) of Belize, Bermuda Monetary Authority (BMA), Comisión para el Mercado Financiero (CMF) of Chile, Insurance Authority (IA) of Hong Kong SAR, Superintendencia Financiera de Colombia (SFC), Superintendencia General de Seguros (SUGESE) of Costa Rica, European Insurance and Occupational Pensions Authority (EIOPA), Central Bank of Hungary, Insurance Regulatory and Development Authority of India (IRDAI), Central Bank of Ireland (CBI), Insurance Regulatory Authority of Kenya, Autorité de Contrôle des Assurances et de la Prévoyance Sociale (ACAPS) of Morocco, Namibia Financial Institutions Supervisory Authority (NAMFISA), De Nederlandsche Bank (DNB), Reserve Bank of New Zealand – Te Pūtea Matua (RBNZ), Insurance Authority (IA) of Saudi Arabia, Prudential Authority (PA) of the Republic of South Africa, Swiss Financial Market Supervisory Authority (FINMA), Prudential Regulation Authority (PRA) of the United Kingdom, National Association of Insurance Commissioners (NAIC) of the United States of America, California Department of Insurance (CDI) and the Insurance and Pensions Commission (IPEC) of the Republic of Zimbabwe. The total insurance assets of these jurisdictions, translated using average the US dollar exchange rate in 2023, accounts for approximately 73% of global insurance total assets, based on estimates from IAIS (2023).

8 Where relevant, jurisdictional examples from IMF FSAP reports are referenced. It should be noted that some of these examples may be applicable to other jurisdictions, beyond the specific jurisdiction covered in the cited reports. It is acknowledged that circumstances in a specific jurisdiction covered in an FSAP report may have evolved since its publication.

Challenges in relation to insurance supervisory resources Graph 1



The percentages in the rankings represent the proportion of respondents who identified each challenge as their top priority (Rank 1), second priority (Rank 2), third priority (Rank 3), or fourth priority (Rank 4).

Source: FSI-IAIS survey

7. **The lack of sufficiently qualified staff continues to be a challenge and will likely persist.** This issue is partly due to insurance authorities facing challenges similar to those of other public entities. One of the main reasons is that remuneration is less competitive than in the private sector.[9] In certain jurisdictions, the pay scale at insurance authorities follows the public sector's rule, restricting the ability of authorities to attract specialists such as actuaries or cyber experts.[10] Additionally, rigid hiring rules, especially when hiring decisions are subject to approval by government ministries and/or bureaucratic public administration processes, further constrain the ability of supervisory authorities to attract and onboard skilled staff. Furthermore, challenges such as limited pathways for promotion and professional development opportunities and restricted access to training programmes can further intensify difficulties in attracting and retaining skilled professionals within the public sector. Budgetary constraints are another contributing factor. Cost efficiency measures, such as targeted investments in technology and improvements in operational processes, can help mitigate the impact of limited funding while enhancing operational effectiveness.

8. **Other human resources-related challenges relate to staff turnover and an ageing workforce.** Possible reasons for high turnover include the compensation gap with the private sector, mismatch between available staff and the volume of work (which is exacerbated by a lack of sufficient staff) and a lack of career progression opportunities.[11] An authority with an ageing workforce, with many older, experienced staff nearing retirement, can face resource challenges in the near future. While having experienced staff is beneficial, the inability to recruit younger replacements poses a significant risk to the

[9] See IMF (2020). In some US states, this challenge is compounded by an ageing workforce, with many older, experienced staff nearing retirement.

[10] See IMF (2022c). The IMF recommended that the Central Bank of Ireland apply sufficient flexibility on remuneration to recruit and retain appropriate talent.

[11] World Bank (2021) states that high turnover in the public sector can often be attributed to compensation gaps with the private sector, particularly in occupations where private sector alternatives offer more competitive wages. Public sector wages, which are typically lower than those in the private sector, make it challenging to attract and retain high-skilled workers or those in high-demand roles, such as digital or technical jobs. Additionally, limited promotion opportunities and flat hierarchies in the public sector can further demotivate employees, contributing to higher turnover rates.

continuity and institutional knowledge of supervisory authorities.[12] High staff turnover can drain expertise away from authorities, potentially losing experienced and skilled staff that took years to develop.[13] Moreover, turnover can disrupt supervisory operations and delay the implementation of critical supervisory initiatives. In some cases, supervisory authorities face "key person" risk where only one staff member possesses the experience or skills to perform critical tasks, creating significant risks in the event of staff departure.[14] Conversely, policies that unnecessarily constrain turnover can limit opportunities to seek appropriately skilled resources, which may affect overall organisational effectiveness.

9. **Some authorities rely on external experts to plug skills gaps, though overreliance on such external resources could present new sets of challenges**. Relying too heavily on external experts may lead to challenges such as increased costs, potential confidentiality risks and loss of institutional knowledge. External experts may gain intimate knowledge of insurers' governance, risk culture and management processes through work outsourced by supervisors. Yet such critical institutional knowledge may not be retained within the supervisory authority.[15] Supervisors may need to institute sound oversight of outsourced activities to maintain accountability and alignment with supervisory objectives and, at the same time, ensure that the skills and knowledge are retained or transferred to internal resources.[16] It is important that supervisors establish measures to preserve institutional knowledge and skills and maintain the confidentiality of information when leveraging external resources. [17]

10. **Expanding supervisory mandates can compound human resource constraints, especially when new responsibilities outpace hiring and upskilling.** Adding new mandates or expanding their activities could divert already stretched resources away from core supervisory activities, which may reduce oversight capabilities regarding the safety and soundness of insurers. Wherever mandates expand to cover areas such as climate-related risks, market development and financial inclusion, the resource implications[18] should be carefully considered. Table 1 provides an overview of the range of mandates and responsibilities of selected supervisory authorities.

[12] See Wranik et al (2025). The article highlights that retirements are surging in the public sector, creating a widening succession gap.

[13] See IMF (2021).

[14] See IMF (2018).

[15] See IMF (2020), which notes how highly valuable experience is lost when reliance is placed on external experts, skills that would have been better kept in-house by state insurance regulators.

[16] IMF (2025c) states that the Autorité de contrôle prudentiel et de résolution (ACPR) imposes contractual arrangements with the third party to include safeguards to ensure absence of conflicts of interest and protection of confidential information. IMF (2020) highlights how having external experts work under the direct supervision of internal staff can mitigate loss of institutional knowledge of insurers' governance and risk culture.

[17] See IMF (2021). The FSAP report findings emphasised the need for Hong Kong's Insurance Authority (IA) to develop a specialised risk function, with the aim of reducing the IA's need to hire external expertise.

[18] See IAIS (2024). ICP 22 applies in terms of anti-money laundering and combating the financing of terrorism. In some jurisdictions, the supervisor may serve as the designated authority for implementing the Financial Action Task Force (FATF) Recommendations to combat money laundering and terrorist financing, as outlined in ICP 22.0.7. This responsibility may have potential implications for supervisory resources.

Supervisory mandates in selected jurisdictions[19] Table 1

Authority	APRA - Australia	DNB – the Netherlands	PA - South Africa	FINMA - Switzerland	PRA/Bank of England - UK①
Safety and soundness	●	●	●	●	●
Financial stability	●	●	●	●	●
Crisis management	●	●	●	●	●
AML/CFT②		●	●	●	×
Resolution		●		●	●
Consumer protection				●	
Financial inclusion		×	●		×
Financial literacy		×	●		×
Fintech and innovation		×			×
Efficiency	●	×	●		×
Competition	●	×	●		●
Climate change		×			×

● = Statutory objective/responsibility (specified in legislation).

× = Non-statutory responsibility (including mandate or function that is undertaken but not explicitly included in legislation.

① The UK Financial Services Markets Bill 2022 introduces a new secondary objective to facilitate the UK economy's international competitiveness and growth, subject to alignment with relevant international standards. See PRA (2025b). ② AML/CFT refers to anti-money laundering/combating financing of terrorism.

Source: Kirakul et al (2021).

11. **Inadequate and unstable funding can severely hamstring insurance supervisors' ability to effectively discharge their core responsibilities.** Insurance supervisors that rely on fees collected from insurers may see their funding decrease if the market shrinks, as the fees are typically calculated as a percentage of assets or premiums. While such funding adjustments may reflect the resource needs (fewer resources when market activity shrinks), the resulting budget uncertainty can make forward planning challenging. Moreover, there are fixed costs such as IT applications that need to be maintained regardless of fluctuations in market size and fee income. In addition, supervisors that rely on financial support from the government or central bank could be vulnerable to economic cycles, fiscal prudence measures or the political landscape. Even if authorities do not rely on government funding, their budget may be subject to oversight by the government or the legislature, as per the summary in Table 2. For instance, an authority may be required to reduce its budget every year as part of broader government cost-saving measures.[20] Budgetary constraints can hamper the ability of supervisors to supervise effectively, invest for the future in terms of IT and capacity building or respond to emerging risks. To address these potential challenges, adequate resource management should underpin stable and sufficient funding.

[19] It is acknowledged that supervisory mandates are often interlinked and the specific scope and definition of statutory objectives may vary depending on jurisdictional legislation. Supervisors may temporarily emphasise one or more objectives subject to the evolution of the jurisdiction's insurance or financial markets. While some authorities may have explicit mandates related to issues such as climate change or fintech and innovation, these themes are typically considered as part of supervisory mandates set out in ICP 1.2. For instance, working on fintech and innovation would typically be part of a competitiveness and market development mandate. Similarly, climate change is typically considered part of safety and soundness, consumer protection and financial stability mandates. See IAIS (2024).

[20] See IMF (2019). APRA is subject to an "efficiency dividend" policy which mandates an annual reduction in future budgetary resources as part of broader government cost-saving measures.

12. **Overarchingly, supervisors need to cope with unexpected surges in resource needs in times of a crisis or unexpected disruptions.** Events such as the Covid-19 pandemic and past financial crises have caused supervisors to face sudden surges in resource demands for more intense supervisory oversight, requiring them to redeploy resources or call on external resources. Under such circumstances, effective resouce management is essential as authorities may need to intensify monitoring, require more frequent reporting from insurers or run ad hoc stress tests – all of which require increased resources. Reliance on external experts may be constrained if there is no ongoing contractual arrangement.

13. **To address these challenges, having a sound resource management approach is essential.** This involves not only addressing funding availability, but also prioritising cost optimisation and efficiencies. Clear identification of resource needs, under normal and stress scenarios, is important so that supervisors can lay the necessary groundwork to secure those resources. Ensuring stable and predictable sources of funding and human resources, along with the flexibility to scale up when needed, is essential to enable supervisors to effectively deliver on their mandates. Another critical component of resource management is being able to allocate those resources effectively across supervisory activities, ensuring that the core supervisory mandate can be fulfilled under any circumstances.

Section 3 - Identification of resource needs

14. **Given the challenges outlined, it is essential for insurance supervisors to systematically identify their resource needs while taking into account cost efficiency measures.** This means determining how much funding is required and what kind of staff skills and numbers are needed. As part of this process, it is important to assess opportunities to improve cost efficiency, such as automating repetitive tasks, reallocating resources to high impact areas, or outsourcing non-core activities. Identifying resource needs that have carefully taken cost efficiency efforts into account is the first step in advocating for and securing the necessary resources, whether from government budgets or industry funding. The process also helps in allocating any existing resources more effectively. By incorporating cost efficiency and process optimisation into this assessment, the identified needs become more credible, increasing the likelihood of securing funding—especially additional funding—from stakeholders, while also enabling more effective allocation of existing resources.

15. **As a starting point, supervisors can benchmark their resources against the ICPs and, if relevant, peer jurisdictions.** Participating in implementation assessment exercises, such as the IAIS's Peer Review Process (PRP) or Member Assessment Programme (MAP) or IMF's FSAPs, may help supervisory authorities to take stock of and gain insights into their resource needs and allocation. Such exercises are particularly useful during the preparatory phase, where supervisors are required to carry out a self-assessment and provide insights into market conditions, industry practices and institutional capacity, as well as supervisory resources, skills and capabilities.

16. **Internal reviews can help to identify resource gaps relative to an authority's mandate**. For example, Canada's Office of the Superintendent of Financial Institutions' (OSFI) audit of its insurance supervision provided ranked recommendations to assist its management in prioritising resource allocation to address its findings.[21] In Australia, the Financial Regulatory Assessment Authority provides independent oversight to assess the effectiveness and capability of the Australian Prudential Regulation Authority

[21] The audit found resource gaps in terms of limited specialist support for non-financial risk assessments (technology, cyber and third-party risks). It recommended that supervisory strategies and plans adequately consider resource availability. See OSFI, "Audit of supervision insurance", 18 August 2025.

(APRA).[22] The body undertakes capability reviews and provides recommendations, including on the resource adequacy of the regulator.

17. **Most of the surveyed authorities identify financial resource needs through their annual budgeting process.** Typically, financial resource needs are determined based on institutional priorities. For example, De Nederlandsche Bank (DNB) prepares an annual budget, which is aligned with its multi-year strategic agenda.[23] APRA develops its Corporate Plan,[24] which outlines the strategic priorities and planned activities of APRA over the next four years, based on the funding approved in the Portfolio Budget Statement (PBS). Budget planning spanning several years is adopted by other authorities. For instance, according to IMF (2022b), South Africa's Prudential Authority prepares and releases a budget every year that provides a forecast of its expected expenses for the upcoming two financial years.

18. **The biggest item in supervisors' expenditure is staff remuneration – therefore, careful budgeting for staff remuneration is critical.** Staff remuneration depends on the number of staff and their profile. Benchmarking compensation structures against financial institutions can help insurance supervisors to retain skilled professionals and minimise staff turnover to the private sector, an approach recommended in IMF (2024). In identifying the requisite staff profile, authorities would need to consider their supervisory approach and priorities as well as the structure and complexity of their insurance market, among other factors. Technology plays an increasingly important role in shaping the supervisory workforce, which may affect the level of tech-savviness in staff profiles that authorities may need.[25]

19. **In a risk-based supervisory regime, the risk rating of insurers can help identify resource needs, in particular the number of front-line supervisors and, potentially, technical experts.** The risk assessment assigns supervised institutions to supervisory categories and enables the supervisor to allocate the appropriate level of supervisory resources.[26] Higher-risk insurers will require more supervisory resources than lower-risk insurers.

20. **Skills or knowledge gaps can also be identified by closely monitoring technological use cases within the insurance industry.** For instance, as insurers upskill on artificial intelligence (AI) technology and widen their use cases, supervisors need to enhance their expertise to understand the corresponding ramifications in terms of risks arising from those use cases. The upskilling may entail additional budget needs for training or knowledge insourcing using external consultants. Across selected FSAP reports of the surveyed countries, skills shortages were identified in the areas of actuarial expertise, risk management, financial analysis, IT, cyber security and data analytics. There is also a growing need for specialised knowledge in group-wide supervision, risk-based capital frameworks, market conduct oversight and emerging areas like fintech and digitalisation.

21. **Scenario analysis and stress tests can be helpful tools to identify supervisory resource needs under adverse circumstances or to deal with unexpected events or crises.** By leveraging tabletop exercises and simulations, authorities can identify weaknesses in resource needs assessment processes and gather insights to inform resource planning, such as investments in specific tools or skills development. For example, supervisors can assess the adequacy of supervisory resources to deal with situations such as the Covid-19 pandemic and geopolitical shifts such as Brexit. The pandemic required rapid reallocation of supervisory personnel and digital transformation to maintain oversight under remote

[22] See APRA (2025a).

[23] IMF (2024) states that the multi-year limits in the cost framework contribute to financial certainty for supervisory authorities and supervised institutions, as well as administrative and political rest.

[24] See APRA (2021).

[25] See Crisanto et al (2025).

[26] See as FINMA (2025).

working conditions.[27, 28] Similarly, Brexit created additional supervisory resource needs in the United Kingdom.[29] These examples highlight how market disruptions can create sudden and substantial resource demands, emphasising the need for flexible resource allocation to address both anticipated and unforeseen events.

22. **Market developments can also influence the identification of supervisory resource needs and their management.** As many jurisdictions, especially EMDEs, pursue measures to improve insurance protection and narrow the protection gap, these insurance markets are expected to grow, potentially very rapidly over the coming years. Market growth may entail more insurance players or increased complexity of products, both of which requiring more supervisory resources. Entry of internationally active insurance groups (IAIGs) may warrant additional resources and specialised expertise to deal with these more complex insurance entities. Such developments may require agility in adapting resource allocation efficiently and effectively.[30]

23. **Regulatory reforms such as the transition to risk-based supervision or the implementation of IFRS 17[31] are also resource drivers.** The transition to risk-based supervision[32] and risk-based solvency regimes demands investments in training, data systems and analytical capacity. The implementation of IFRS 17 requires supervisors to enhance their understanding of financial reporting and align their suptech tools to specific reporting requirements and disclosures in IFRS 17. Major regulatory reforms may lead to increased supervisory processes that require additional resources. Box 2 describes the impact of adoption of IFRS 17 on supervisory resources.

[27] Badat et al (2021), in a brief, explore whether the transition to remote working arrangements for insurance supervisors during the Covid-19 pandemic required significant adjustments, including the rapid deployment of IT tools, digital infrastructure and enhanced communication channels to maintain effective oversight. While remote supervision enabled efficiency gains through more frequent and agile engagements, it also highlighted challenges such as the inability to fully replicate on-site assessments of insurer culture, behaviour and operational processes. These changes necessitate the need for resource allocation.

[28] IMF (2022) points out that during the Covid-19 pandemic, the PRA, like many other supervisory authorities, had to reprioritise the use of its resources due to heightened market risk.

[29] IMF (2022) captures the resource needs after and as a result of Brexit. Following Brexit, the PRA faced increased resource demands to maintain systemic risk oversight and supervise systemically important financial firms and markets.

[30] See IMF (2021).

[31] See Box 2.

[32] See Box 3. Note that ICP 14 (Valuation) establishes the requirements for the valuation of an insurer’s assets and liabilities for solvency purposes, without prescribing a specific valuation approach.

Box 2

IFRS 17 – supervisory resource implications

In many jurisdictions, the adoption of IFRS (International Finanical Reporting Standard) 17 Insurance Contracts represents one of the most transformative changes in the history of insurance supervision. For supervisors, it is not just an accounting shift, it is a regime change that demands a complete recalibration of how insurers are overseen.

From a supervisory perspective, one of the major implications of IFRS 17 is the need for new skillsets. The standard's technical complexity requires upskilling of staff and, in some cases, recruitment of new experts. The European Insurance and Occupational Pensions Authority's (EIOPA) assessment of IFRS 17 implementation found that understanding IFRS 17, in particular due to the lack of detailed guidance and experts, is a major challenge for insurance groups.① To address this challenge, staff training programmes can be introduced and dedicated IFRS 17 project teams can be established with technical experts to support the team members.

In addition to technical expertise, IFRS 17 requires some supervisors to upgrade data collection platforms and analytical tools to capture and process new information. With the implementation of IFRS 17, it is more likely that integrated systems will be developed for the dual purposes of accounting related to insurance contracts and input into the risk-based solvency balance sheet. Supervisors may need additional financial and human resources to develop and implement such systems.②

The implementation of IFRS 17 highlights the importance for supervisory authorities worldwide to proactively prepare for major regulatory changes. It emphasises the value of investing early in human, financial and technological resources. This includes fostering teams with the expertise to navigate complex frameworks, adopting advanced technologies to manage growing data demands and ensuring sufficient funding is in place to support these initiatives. By drawing lessons from the challenges of IFRS 17, supervisory authorities can enhance their preparedness for future transitions, contributing to the protection of policyholders and the maintenance of financial stability.

① See EIOPA (2024). Additionally, in the European Union, the adoption of IFRS 17 is mandatory only for publicly traded companies and not for all insurers. It is worth noting that adoption of IFRS 17 may vary across jurisdictions, depending on local regulatory frameworks and the specific requirements set by national authorities. ② See IAIS (2025).

24. **On the other hand, the lack of supervisory resources, especially for certain skills, can influence or constrain regulatory approaches.** For supervisors with limited capacity, dedicating resources to complex regulatory approaches may detract from their ability to address other pressing priorities. For example, the Hong Kong Insurance Authority has chosen not to adopt full internal models for regulatory capital purposes,[33] partly to avoid the resource-intensive process of validating and monitoring such models.[34] This approach allows supervisors to focus their limited resources on other critical supervisory functions, ensuring that their oversight remains effective and efficient within their capacity.

25. **Technology adoption by supervisors, such as the implementation of suptech tools, often entails significant upfront costs but can lead to long-term efficiency gains in supervisory operations.** Supervisors introducing new suptech tools may require large financial resources upfront to acquire and implement the technology and to upskill staff to use the technology.[35] This may involve specialised training programmes, hiring new talent with technical expertise or collaborating with external technology providers. For example, these tools can automate routine tasks, enhance data analysis capabilities and improve risk monitoring processes, ultimately allowing supervisors to focus on higher-

[33] Under the general insurance module, insurers can opt to apply to the Insurance Authority for approval to adopt an own assessment approach to determine capital requirements for natural catastrophe risk. The own assessment is essentially considered an internal model.

[34] See IMF (2021).

[35] See Crisanto et al (2025).

value activities. As a result, the efficiency gains from suptech adoption may create opportunities to streamline operations and optimise workforce requirements, potentially reducing the overall headcount needed for certain tasks.

Section 4 - Sources of funding

26. **The sources of funding for insurance supervisors need to be stable and predictable, with necessary flexibility to increase funding as needed, subject to cost efficiency considerations.** The stability and predictability of funding as well as the ability to maintain cost efficiency are crucial to enable authorities to engage in forward-looking, multi-year planning of their core activities. For this reason, levies on premiums and fees imposed on regulated institutions could be suitable forms of funding.[36] In addition, authorities should have the ability to raise additional funding when needed, for example when implementing new regulations. For example, APRA required additional resources in 2017–18 to cover new initiatives such as stress testing, IT security and a review of industry remuneration practices.[37] The Central Bank of Ireland (CBI) temporarily allocated additional resources in its authorisation teams to deal with an anticipated increase in licensing activities in the lead up to Brexit.[38]

27. **It is also crucial to have access to additional funding or skills resources at short notice, supplementary to core sources of funding, to deal with unexpected issues.** For example, in times of a crisis, authorities may need to deploy additional supervisory resources to deal with troubled insurers. The additional resources could be sourced from redeployment of existing staff or from external experts or consultants. In jurisdictions where technical capabilities are limited or still developing, often due to the level of market development or labour market conditions, authorities may need to consider sourcing expertise from outside the jurisdiction, such as through secondment programmes. It is important to establish a contingency resource plan in advance of a crisis, so that these resources can be called on when the time comes. Contracts with consultants or external experts can be set up in advance, and a contingency fund may be set up to deal with unexpected issues.

28. **Most of the surveyed authorities rely mainly on industry fees and levies as their main sources of funding.** These fees and levies can be supplemented by fines charged to insurers as well as a premium tax, with the supplementary funding generally accounting for a small portion of the total funding.[39] In some jurisdictions, authorities that are part of central banks can rely on their support for funding.[40] For example, the Reserve Bank of New Zealand (RBNZ) funds the costs of insurance regulation and supervision from its general resources.[41] A small number of surveyed authorities rely on investment income to support their funding needs. Graph 2 shows the composition of sources of funding in the surveyed jurisdictions.

[36] See IMF (2021).

[37] See IMF (2019). In the report, APRA can submit a New Policy Proposal to the Australian government to request additional funding if it is asked to undertake new activities or it is inadequately resourced to meet future demands.

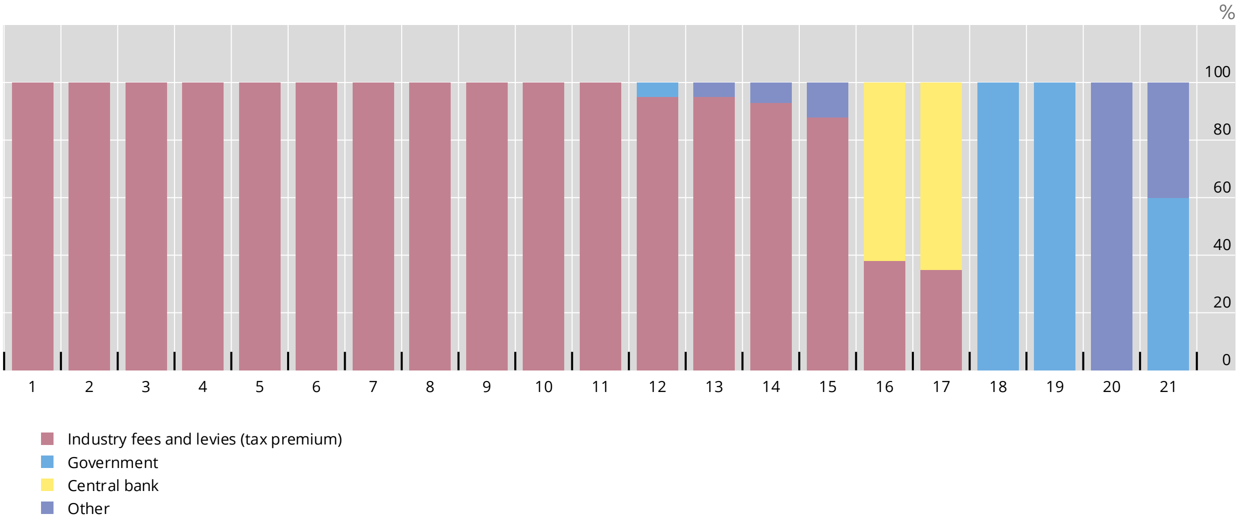
[38] See IMF (2022c).

[39] See Box 3 for a comparison of industry fees charged to insurers. It should be noted that jurisdictions may use different terminology to refer to fees or levies imposed on insurers. It is acknowledged that a premium tax imposed on policyholders may not accrue to insurance supervisory authorities in all jurisdictions.

[40] IMF (2025c) mentions that, in 2022, the ACPR drew upon reserves held by Banque de France, as its expenditure exceeded its capped income by EUR 22 million.

[41] See IMF (2017).

Sources of funding for surveyed insurance authorities Graph 2



Source: FSI-IAIS survey

29. **Most of the surveyed authorities, especially standalone insurance supervisory agencies, adopt a full cost recovery funding approach through industry fees and levies, seeking to recoup their operational expenses.** Adopting cost recovery mechanisms may help supervisory authorities to reduce their reliance on government funding, potentially enhancing their financial independence to a certain extent, subject to robust safeguards to ensure that the funding mechanism remains stable, transparent and free from undue influence.[42] The CBI, for example, aims to move towards a full cost recovery model, increasing the proportion of costs attributable to the regulated industry.[43] Yet, there needs to be careful consideration on the trade-offs between government versus industry funding, taking into account who ultimately bears the cost of supervision.

30. **The cost recovery approach can also be a useful approach to mitigate a funding shortage, for example, by charging firms for on-site inspections.** This could make sense, as longer or more in-depth on-site inspections due to greater complexity of an insurers' business, or a riskier business model, should entail higher costs for the firms concerned.[44] Additionally, the introduction of fines or penalties could supplement supervisory funding, though they should not be relied on due to their unpredictability and the general objective of having well-run insurers that comply with regulations. It is also important to consider the potential behavioural impact on staff if fees or penalties become a significant funding source, as this could inadvertently influence supervisory priorities or create conflicts of interest, posing a risk to supervisory independence.

31. **Flexibility to secure, reallocate and scale human and financial resources is critical to cope with fluctuations in resource needs.** In the United Kingdom, the Financial Services and Markets Act

[42] Quintyn and Taylor (2008) identified four key dimensions of supervisory independence: i) regulatory independence, ii) supervisory independence, iii) institutional independence, and iv) budgetary independence. They argue that supervisors should operate free from external influence over their budgets, whether from government or industry. Furthermore, they highlight the significant role of local political culture in shaping a jurisdiction's ability to achieve supervisory independence, particularly in jurisdictions where robust institutional frameworks to safeguard against undue influence are lacking.

[43] See IMF (2022c).

[44] See IMF (2022). The PRA's strategic review report highlighted the need for more flexible and risk-based resourcing for supervision, including exploring cost recovery mechanisms under the Financial Markets and Services Act (FSMA).

(FSMA)[45] grants the PRA powers to engage independent reviews by outsourcing certain supervisory activities to third parties. The costs of such reviews are paid directly by the firm and need to be proportionate to the benefits derived from the review. In Hong Kong SAR, the Insurance (Prescribed Fees) Regulation[46] lays out the fees for specific regulatory activities such as an application for approval of the appointment of a director.

32. **Most budgets are approved by the executive (ministry of finance) or the legislative body.** For example, in the Netherlands, DNB consults on its draft budget with industry representatives and requires approval by the relevant Dutch ministries.[47] DNB needs to provide an annual report on the discharge of its duties, including achievements on key performance indicators (KPIs)[48] – which is submitted to the relevant ministries. In Hong Kong, the Insurance Authority's budget is subject to approval by the Legislative Council (LegCo (2023)). As per OECD (2024), in Chile, the yearly budget of the CMF is approved and endowed by the Chilean Budget Office. In the United Kingdom, the PRA consults on the allocation of fees among firms every year and has the flexibility to raise additional funds during the year for material changes (see IMF (2022a) and Prudential Regulation Authority (2025)). Table 2 provides a sample of the surveyed authorities with different funding and budget accountability modalities.

Sources of funding and budget accountability of selected authorities Table 2

Authority	Industry fees and levies①	Government support	Central bank support	Others	Executive	Legislature
APRA – Australia	95%	5%	0%	0%	Yes②	Yes
BMA – Bermuda	88%	0%	0%	12%	Yes③	Yes④
PRA – UK	100%	0%	0%	0%	Yes⑤	No
DNB – the Netherlands	100%	0%	0%	0%	Yes⑥	Yes⑦
PA – South Africa	38%	0%	62%	0%	Yes⑧	Yes⑨
CMF – Chile	0%	100%	0%	0%	Yes⑩	No
IA – Hong Kong	93%	0%	0%	7%	Yes⑪	Yes⑫
IRDAI – India	100%	0%	0%	0%	Yes⑬	No

① Industry levies and fees may be denominated differently across jurisdictions, using terms such as insurance supervisory levies, levies, premium levies, fees, renewal fees or premium taxes. ② Australian Government through Treasurer. See APRA (2025b). ③ Minister of Finance. See BMA (1969). ④ See BMA (1969). ⑤ Accountable to parliament. See PRA (2025a). ⑥ Ministry of Finance and the Ministry of Social Affairs and Employment. See DNB (2025a). ⑦ See Nagelkerke (2016). ⑧ Minister of Finance. See RSA (2017). ⑨ See RSA (2017), Section 239. ⑩ Ministry of Finance through Directorate of Budgets (DIPRES). According to OECD (2024), DIPRES is responsible for overseeing the allocation of state financial resources, regulating and guiding the formulation of the national budget, preparing expenditure ceilings and draft proposals, and monitoring and evaluating budget execution. ⑪ See IA (2025), Section 5B (3) and (4) ⑫ See HK (2025). Section 5B of the Ordinance requires the Insurance Authority (IA) to submit a corporate plan for the next financial year. ⑬ See IRDAI (2020).

Source: FSI-IAIS survey

45 As per PRA (2000), see Section 166 of the Financial Services and Markets Act 2000.

46 See IA (2024).

47 See IMF (2024).

48 DNB (2025b) outlines KPIs on the effectiveness and efficiency of supervisory activities, with specific targets for compliance, risk management and operational priorities, for example providing cyber resilience and outsourcing insights for 95% of medium and large institutions.

Box 3

Industry fee modalities

Given that fees or levies on regulated entities form the bulk of funding sources for most of the surveyed authorities, this box describes the modalities of the fee/levy calculations. In general, the fees are calculated as a percentage of premiums or assets. Table 3 sets out the annual fee/levy methodology.

Industry fees and levy modalities[49]

Table 3

Jurisdiction	Annual fee	Notes
APRA - Australia[50]	Life insurers (restricted): 0.01377% X assets (minimum AUD 22,500 and maximum AUD 1,150,000). Life insurers (unrestricted): 0.006336% X assets. General (restricted): 0.01195% X assets (minimum AUD 22,500 & maximum AUD 1,450,000)). General (unrestricted): 0.006607% X assets.	The restricted component has a cost-of-supervision-based rationale. The unrestricted component has a systemic impact and vertical equity rationale.
CBI – Ireland[51]	The levy payable depends on impact category as follows: Low: EUR 28,147 Medium low: EUR 90,608 Medium high: EUR 455,784 High: EUR 1,993,369 Ultra-high: EUR 4,393,100 Insurance undertakings authorised in another EEA state (gross written premium on Irish risk business or flat rate levy): The levy varies from EUR 21,110 to EUR 227,892.	The impact categories are defined in appendix 3 of CBI (2023). EEA – refers to European Economic Area
IA – Hong Kong[52]	Long-term/short-term insurers: HKD 300,000 + variable fee. Long-term and short-term (composite insurers): HKD 600,000 + variable fee. Special purpose insurer: HKD 15,000. Captive insurer: HKD 30,000 + variable fee.	
IRDAI - India[53]	(1/20 X 1%) X gross premium written in India (minimum of Rs 10,00,000 and maximum of Rs 10 Crore).	
IRA - Kenya[54]	1% X gross direct premiums written.	
NAMFISA - Namibia[55]	Long-term insurer: 0.41% X gross written premium not received through a long-term insurance broker.	

49 Industry levies and fees may be denominated differently across jurisdictions, using terms such as insurance supervisory levies, levies, premium levies, fees, renewal fees or premium taxes.

50 See APRA (2023).

51 See CBI (2023). The levy payable per impact category is as per Table 3 and Table 4.

52 As per IA (2025) and IA (2024).

53 See IRDAI (2024), as per Annexure 8 (English version) in the annual report 2023–24.

54 See IRA (2024).

55 See GRN (2017).

	Long-term insurer: 0.48% X gross written premium received through a long-term insurance broker.
	Short-term insurer: 1% X gross written premium not received through a short-term insurance broker.
	Short-term insurer: 1.09% X gross written premium received through a short-term insurance broker.
	Lloyds: 1% X gross written premium.
IA – Saudi Arabia[56]	Insurers and brokers: 0.5% X total underwritten premiums excluding local share of reinsurance business.
	Insurance/reinsurance brokers: 1% X total commissions and fees.
CDI – USA[57]	2.35% X (gross premiums less return premiums).

Section 5 - Allocation of funding and skills/expertise

33. **Having a clear supervisory mandate anchored firmly on prudential, conduct or financial stability objectives is critical to serve as guide on how authorities should allocate resources.** Finite resources require authorities to prioritise their activities and maintain cost efficiency, and a useful guidepost to do so is to assess those activities against authorities' core mandates. This requires clarity that core supervisory mandates are safeguarding the safety and soundness of insurers and the insurance sector, protecting policyholders' interests and maintaining financial stability. Aligning resource allocation with core mandates is critical to direct resources towards activities with the highest supervisory value relative to cost as well as for accountability and transparency purposes, as this allows stakeholders to understand how resources are being utilised.

34. **Another key consideration when allocating supervisory resources is the costs and benefits of a specific activity.** Given that resources are scarce, it is important to prioritise resource allocation based on the expected benefits. For example, IMF (2021) highlights that allocating significant resources to complaints handling may not always be proportionate to the supervisory value gained. In such cases, transferring complaints handling to an independent body could free up resources for more forward-looking supervisory activities. This example underscores the broader principle that supervisors should periodically assess whether certain tasks are best performed in-house or could be more effectively managed by external parties, ensuring resources are allocated to activities that maximise supervisory effectiveness.

35. **Adopting a risk-based supervisory approach can be an effective way to allocate scarce resources.** Prioritising resources based on the level of risk posed by different entities or activities allows supervisory authorities to enhance the efficiency and effectiveness of their supervisory oversight. By directing attention and resources to areas that present the greatest potential risks, supervisors can ensure that their actions have the maximum impact in safeguarding financial stability and protecting policyholders. This targeted approach not only helps mitigate risks but also ensures that limited supervisory resources are utilised in the most strategic and impactful manner, thereby easing the strain of resource shortages. Furthermore, a risk-based allocation framework enables authorities to remain proactive, focusing on high-risk institutions or activities that could have significant repercussions on the

[56] See Saudi Arabian Monetary Authority (2024).

[57] See CDI (2024).

financial system, while allocating fewer resources to lower-risk areas. Box 4 describes how risk-based supervisory frameworks can be used by supervisors to allocate resources effectively.

Box 4

Risk-based supervision (RBSup) and forward-looking supervision

What is RBSup?

RBSup is a formal, structured process whereby a risk assessment is performed on each of the insurers and insurance groups in a jurisdiction to determine a risk profile in order to guide the allocation of supervisory resources.① IAIS (2024) highlights the importance of allocating proportionate supervisory resources to insurers, lines of business or market practices that pose the greatest risk to policyholders, the insurance sector or the financial system as a whole.

Resource demands in implementing RBSup

The transition to RBSup necessitates significant upfront resource investments to ensure its successful implementation. As highlighted by the IMF, adopting RBSup is a multi-year project that requires dedicated additional human and financial resources,② particularly at the initial stages of implementation when foundational changes may demand significant effort and investment. It often involves a fundamental restructuring of the regulatory authority, including the redesign of supervisory processes and tools, as well as the modernisation of information technology systems to support the new approach effectively. For example, the Insurance Regulatory and Development Authority of India (IRDAI) is investing heavily to transition to RBSup by establishing a dedicated project team and appointing a consultant to develop its RBSup framework.③

Implications of RBSup in supervisory resource allocation

A key element of RBSup is the ability to dynamically allocate supervisory resources in response to evolving risk profiles of insurers. The IMF, in its technical note on the Netherlands, highlights that the supervision of insurers is effective, supported by a risk-based, intrusive and transparent supervisory approach.④

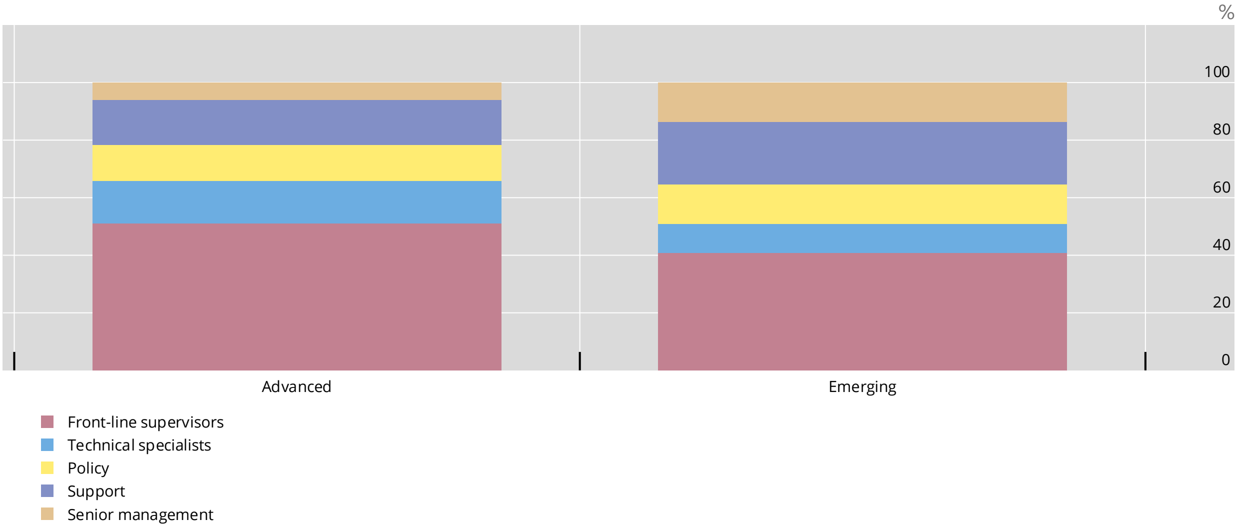
① See IAIS (2025). ② See IMF (2024). ③ See IMF (2025a). ④ See Windsor et al (2024).

36. **Among the surveyed sample, authorities in developed jurisdictions have a higher proportion of front-line supervisors and technical specialists, while those in emerging jurisdictions have a higher proportion of support staff.** Advanced jurisdictions typically have a larger number of relatively more complex insurers, thus requiring more front-line supervisors than EMDEs. As shown in Graph 3, authorities in advanced insurance markets employ a larger proportion of technical specialists to manage more complex risks, such as risks arising from technological developments as well as innovative insurance products. The surveyed supervisors in EMDEs seem to have more support staff[58] than advanced jurisdictions. The staffing mix reflects both demand and supply factors. On the demand side, the nature, scale and complexity of insurers' activities, and the stage of transitioning to risk-based supervision may explain the relatively lower proportion of front-line supervisors and higher proportion of support staff. On the supply side, less reliance on technical specialists may stem from limited availability of experts in domestic labour markets, budget constraints on hiring or contracting external expertise and fewer upskilling opportunities, with legacy staffing structures also playing a role.

[58] Support staff refers to staff serving the insurance division in the capacity of human resources, finance, legal, administration, IT operations, procurement and communications.

Composition of staff of the surveyed insurance supervisors in advanced and emerging markets

Graph 3



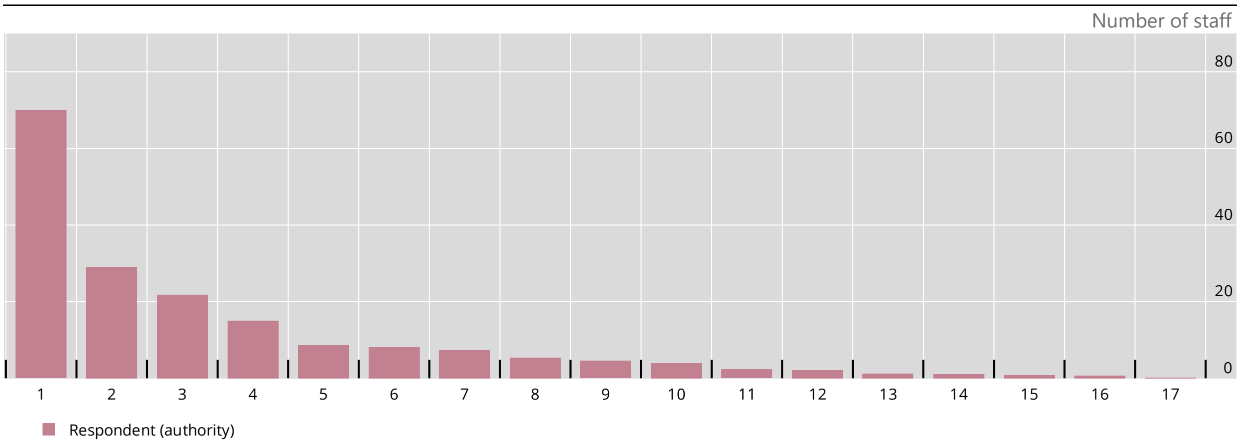
Source: FSI-IAIS survey

37. **Supervisory staffing per premium volume tends to be higher in smaller markets and lower in larger markets, potentially indicating economies of scale in oversight.** Graph 4 shows that jurisdictions with lower total premiums often exhibit a higher ratio of staff per premium, indicating a potentially greater reliance on human resources to oversee and regulate their insurance sectors as well as "fixed costs" of supervision, which remain constant regardless of the size of the insurance market being supervised. Conversely, jurisdictions with larger total premiums tend to have a lower staff-to-premium ratio, suggesting that these authorities may operate more efficiently or possess the capacity to manage larger volumes of insurance activity with fewer personnel.

Supervisory staffing per premium written

Number of staff per total premiums (USD billions) per authority

Graph 4



Source: FSI-IAIS survey

38. **Internal staff form the majority of the workforce in the surveyed authorities.** A small number of surveyed authorities rely on secondees from other regulatory authorities, or external experts, interns and temporary agency workers. For integrated authorities, the insurance supervision function may benefit from support from other cross-functional divisions such as recovery and resolution, enforcement and supervisory policy.[59]

39. **Insurance supervisors may rely on external experts to address gaps in human resources or insufficient funding to hire qualified experts.** In some cases, insurance supervisors do not rely at all on external expertise, while in others, there is a significant level of reliance. IMF (2020) points out that there is a continuum of such reliance across the United States, based on the particular needs and resources of the individual state. External experts offer flexibility in resource allocation, allowing supervisors to access highly valuable expertise as needed, especially for complex financial examinations. In the United Kingdom, the Financial Services and Markets Act (FSMA)[60] grants the PRA powers to engage independent reviews by outsourcing certain supervisory activities to third parties.[61] The Swiss Financial Market Supervisory Authority (FINMA) has swift and flexible access to external experts[62] such as auditors or investigators, for example to conduct complex examinations or investigations. In New Zealand,[63] the appointment of external experts is specified in legislation, specifically the RBNZ may appoint an actuary to advise on an insurers' transfer of business or amalgamation, or an investigator to deal with insurer insolvency and restructuring.

40. **Few surveyed jurisdictions rely on external experts, primarily due to insufficient financial resources, and those that do require varying skillsets.** Graph 5 shows the distribution of the proportion of different external skills used by the surveyed authorities. External actuarial and IT experts are the most significant skills sought after, reflecting their importance for risk-based supervision and technological oversight. Cyber experts are notably underutilised, with only one jurisdiction reporting reliance, suggesting lesser need for external cyber security capabilities. Legal and training experts are also minimally relied upon, probably because this expertise is typically filled by internal staff. Other experts that authorities use include project managers, communication specialists and economic analysts. In one major jurisdiction, experts in areas such as financial regulation, consumer affairs and anti-fraud are used heavily.

[59] See IMF (2025d).

[60] See FSMA (2000), specifically Section 166 and Section 166A.

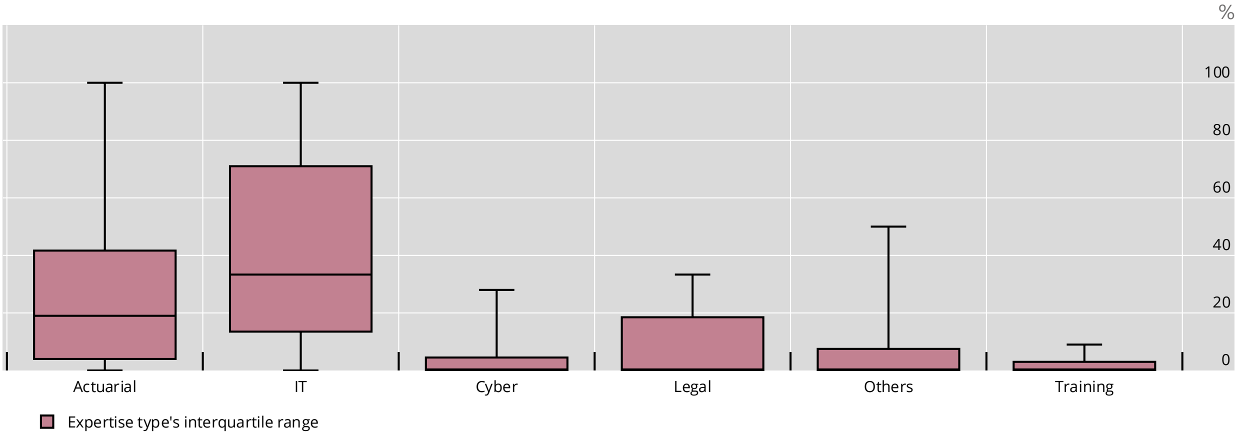
[61] See IMF (2022). For instance, the United Kingdom's Prudential Regulation Authority (PRA) can outsource certain supervisory activities to third parties, including via Section 166 and Section 166A of the Financial Services and Markets Act 2000. These provisions allow the PRA to commission skilled person reports on regulated entities, enforce compliance and recover associated costs from the entity.

[62] As per IMF (2025d), FINMA maintains a list of suitable candidates for such appointments, and the cost of the agent or mandatary is borne by the entity that is the subject of the supervision.

[63] See IMF (2017).

Composition of external experts engaged by surveyed insurance authorities

Proportion of different types of experts used — Graph 5

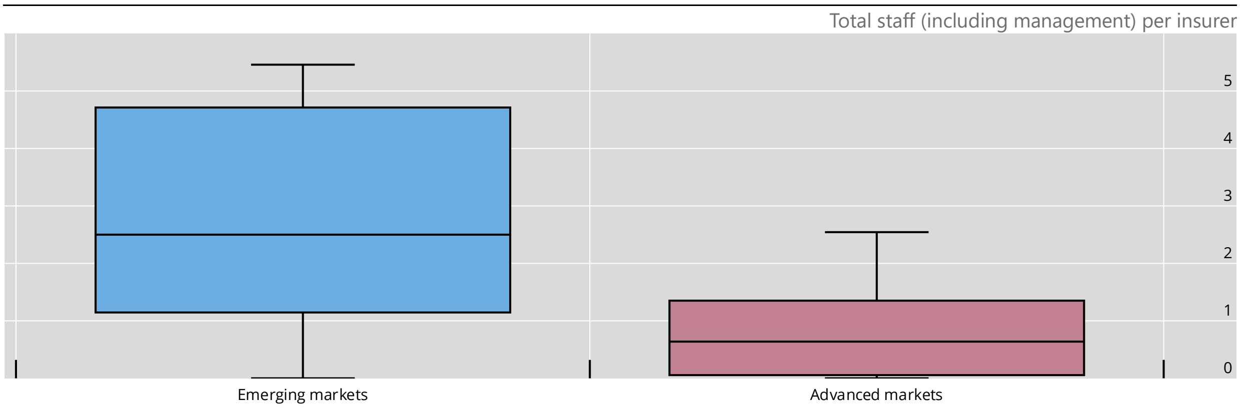


Source: FSI-IAIS survey

41. **The surveyed supervisors in EMDEs generally have a higher number of staff per insurer than those in advanced markets (see Graph 6).** This disparity could stem from differences in market structure and regulatory frameworks, and labour market conditions such as variations in labour costs or availability of skilled personnel. Emerging markets often have smaller insurance sectors with fewer insurers, which may result in a higher ratio of staff per insurer to ensure effective oversight. In contrast, advanced markets typically have larger, more established insurance industries with well-developed risk-based regulatory frameworks, reducing the need for extensive supervisory staffing per insurer. This trend may also reflect structural factors such as the use of central specialist teams to provide horizontal support to functional teams, higher labour costs or public sector hiring constraints. While higher staff per insurer ratios in emerging markets may enhance oversight and regulatory enforcement, they might also indicate inefficiencies or resource allocation challenges. Conversely, advanced markets may need to ensure that their relatively lower allocation of supervisory resources do not lead to gaps in oversight, especially as the insurance sector becomes more complex.

Staff per insurer in the surveyed insurance authorities

Comparison of total staff per insurer by market development — Graph 6



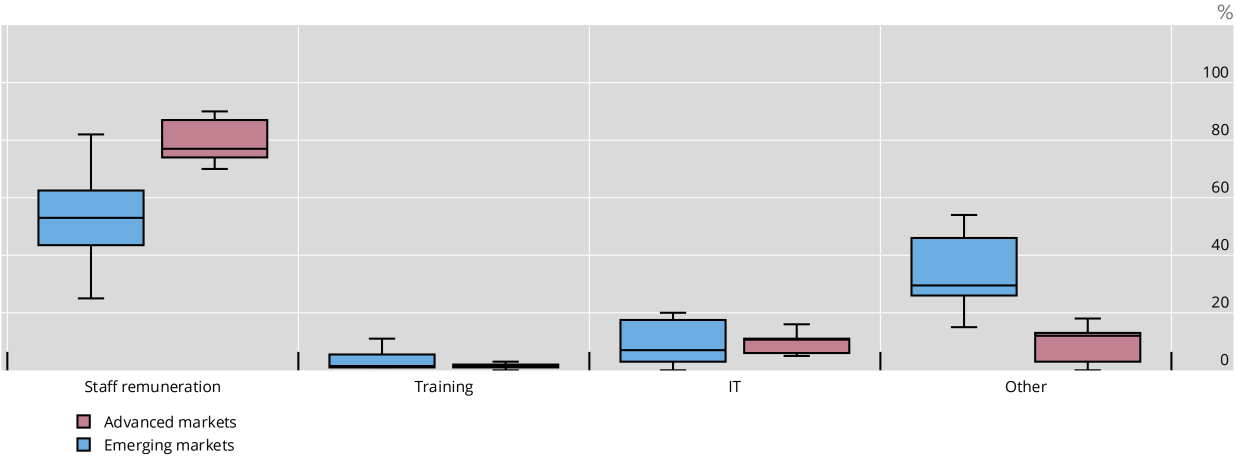
Source: FSI-IAIS survey

42. **Over the next three years, most of the surveyed authorities anticipate an increase in headcount, mainly due to new regulatory initiatives.** Such initiatives include the introduction of risk-based capital, a transition to risk-based supervision, digital transformation and data supervision, anti-money laundering/combating financing of terrorism (AML/CFT) supervision, recovery and resolution, operational resilience, technology/AI supervision, cross-border and cross-sector supervision and IFRS implementation. Some authorities expect increasing headcount due to an expanded mandate to support insurance technology development and financial inclusion. Several authorities expect to require more staff to deal with evolving risks such as cyber risk and sustainability risk, and to cope with the expected growth in the industry in terms of number of licensees and market size and the growing complexity of insurers' business models. Nevertheless, a small number of surveyed authorities do not expect to expand their headcount, either due to budgetary constraints or to the fact that the organisation was only recently been established. One surveyed authority is expecting to reduce its headcount due to organisational restructuring, which may also reflect broader efficiency and productivity initiatives aimed at optimising resources.

43. **Budget allocation varies widely across authorities, depending on the level of economic development.** While staff remuneration is the most significant cost in most authorities, the proportion is higher in developed jurisdictions (Graph 7). This probably reflects the more complex or sophisticated insurance markets and regulatory frameworks, requiring specialised expertise to oversee complex insurers and products, as well as higher remuneration costs. The surveyed authorities in emerging jurisdictions have slightly higher IT expenditure, possibly due to modernising their IT platforms to automate supervisory processes. As expected, they also tend to spend more on training and building internal capacities.

Budget allocation in advanced versus emerging markets

Boxplots of budget types by market development | Graph 7



Source: FSI-IAIS survey

44. **Over the next three years, some surveyed authorities are anticipating an increase in budget needs.** The reasons include implementation of new legislation and accounting standards; technology modernisation, including adoption of suptech to improve supervisory efficiencies; enhancements to cyber security; increased engagement with the industry, other supervisors and policyholders; and internal capacity building. Increased headcount in certain authorities is expected to be a driver for increased budgetary needs.

Section 6 – Conclusion

45. **Having adequate supervisory resources and optimising the use of available resources are critical to enable insurance supervisors to fulfil their core supervisory mandates.** When authorities lack suitably skilled human resources or the funding needed to supervise insurers effectively, blind spots can emerge that may increase the likelihood of insurer distress. In the extreme, the cost of insurer failures could far exceed the cost of adequately resourcing insurance supervisors. In addition, resource constraints could also slow implementation of critical regulatory reforms to comply with international standards. Delaying such measures could expose supervisory gaps, such as allocating resources according to the riskiness of insurers or collaborating with regulators in other sectors and/or jurisdictions to avoid regulatory arbitrage.

46. **Yet insurance supervisors continue to face human resource constraints – both in terms of quantity and quality**. Remuneration gaps relative to the private sector, rigid hiring rules and budget limitations can compound issues arising from high staff turnover, heavy workloads (not least due to expanding mandates) and an ageing workforce. Reliance on external experts to plug the human resource gap should be considered cautiously to avoid losing institutional knowledge, especially information on insurers' governance and risk culture.

47. **While financial resources may not currently be the most pressing challenge in certain jurisdictions, proactively anticipating potential gaps and challenges could strengthen resilience.** Establishing contingency buffers to address unexpected situations may be warranted. For example, as the majority of funding relies on fees levied on insurers, authorities' main funding source may fluctuate with market conditions, giving rise to budget uncertainty. Additionally, unexpected financial turmoil could trigger sudden surges in supervisory resource needs for intensified monitoring and intervention. In jurisdictions where the insurance supervisory authority's budget is either capped or controlled by government appropriations, challenges may arise in addressing the growing complexity of the insurance sector. To mitigate these risks, authorities could benefit from forward-looking budget resource planning that not only accounts for known challenges but also considers potential unknowns. This approach would allow for contingency buffers and the development of ex ante plans to manage ex post needs during crises, ensuring effective oversight without imposing undue costs on the industry.

48. **The resource implications of expanding the mandates and activities of supervisory authorities should be considered carefully.** As resources are finite, supervisors may need to deprioritise mandates or activities that do not directly contribute to their core supervisory objectives. When identifying resource needs, insurance supervisors should anchor planning on their core mandates and strategic priorities. Importantly, supervisory resource identification needs to reflect cost efficiency and process optimisation measures and should should be risk-based and forward-looking, allocating more resources to areas or insurers that pose the most serious threats to supervisory objectives. The compounding forces of budgetary restrictions, expanding supervisory mandates and lack of expert skills can restrict supervisory effectiveness, with potential implications for safeguarding the protection of policyholders and financial stability.

49. **Resource constraints, whether in terms of skills or quantity, can significantly influence the design and implementation of regulatory requirements and supervisory approaches**. These may lead supervisors to opt for simpler regulatory frameworks, which may come at the expense of reduced risk sensitivity. It is important to ensure that resource constraints do not impede implementation of sound regulatory requirements, in line with international standards. To overcome such constraints, supervisors can leverage technology to streamline processes and collaborate with international bodies and peer jurisdictions to help bridge resource gaps, ensuring that supervisory frameworks are not compromised due to lack of technical expertise.

50. **In order to support operational independence, financial independence could be an important enabler.** Stable, predictable and transparent financing, as well as the ability to deploy those resources as an authority sees fit are all critical to the independence of a supervisor.[64] Funding sources that are dependent on the government can expose authorities to undue interference in the discharge of their mandates, particularly in jurisdictions where robust safeguards are not in place. Undue interference by a funding provider could lead to delays in decision-making, prioritisation of other objectives over supervisory objectives or even the risk of insufficient funding to address emerging risks. Authorities may consider supplementary funding arrangements, such as seeking the authority to implement a full cost recovery approach (charging for specific supervisory activities) in addition to annual fees levied on licensed insurers.

51. **The next generation of insurance supervision requires thoughtful planning and deployment of supervisory resources.** As the insurance sector and its oversight continue to be shaped by technology and market developments, investing for the future becomes critically important, in terms of both human and technological resources. Regular assessment of the evolving supervisory resource needs will be important. Underpinning this forward-looking approach is having adequate financial resources and a solid top-down vision to allocate sufficient funding to transform supervisory frameworks for the future. Importantly, effective resource management should include fostering a culture of cost efficiency and continuous improvement to optimise the use of available resources. Without adequate funding nor cost efficiency discipline, skilled staff and appropriate tools, even a well-designed regulatory framework may fall short in practice.

[64] See IMF (2020).

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