

Risk Management and Internal Controls

Bank Negara Malaysia (BNM) is exposed to various risks arising from its daily activities and operations. Risk events, should they occur, may impact BNM's reputation, lead to financial setbacks, business disruptions or impede BNM from achieving its policy objectives. To address this, BNM has implemented the Enterprise Risk Management (ERM) Framework.

The ERM Framework facilitates the systematic identification, assessment, monitoring, and management of these risks. It sets up the necessary oversight, control, and discipline to foster a robust risk culture (Diagram 1). The ERM Framework also serves to align BNM's risk management policies, processes and systems across the organisation. In 2023, we updated our ERM Framework as part of a regular review exercise. The objective of the review was to ensure that the ERM Framework continues to support effective management of BNM's risk exposures and reflects current developments in leading risk management practices.

We also updated other risk management frameworks and policies to ensure that they are aligned with the ERM Framework and remain effective in surfacing key risks. Frameworks and policies which were updated included the Financial Risk Management Framework, Cyber Resilience Framework, Operational Risk Management Framework and Operational Risk Management Policy. We also established a Technology Risk Management Framework to enhance our technology risk management practices and strategy. Additionally, we introduced a model risk guide for managing risks associated with the development and usage of quantitative models.

Risk Governance and Oversight

Our risk governance structure (Diagram 2) reflects a shared responsibility for managing risks between line departments, independent risk management and control functions, as well as internal audit.

BNM's Board of Directors, supported by the Board Risk Committee (BRC), oversees our risk management frameworks and practices. The Board of Directors also sets the 'tone from the top' in promoting the desired risk culture across the organisation.

The accountability for implementing sound risk management rests with BNM's Senior Management. This is operationalised through the Risk Management Committee (RMC) and Reserve Management Committee (ReMC). The RMC is the main forum for focused and regular deliberation on enterprise risk issues, while the ReMC oversees financial and operational risks relating to management of BNM's international reserves.

The RMC is supported by the Financial Risk Management Committee (FRMC), Operational Risk Management Committee (ORMC) and Crisis Management Team (CMT). The FRMC and ORMC are responsible for the management of non-reserves related financial and operational risks, respectively. Meanwhile, the CMT provides oversight on business continuity management by ensuring crisis preparedness. CMT also coordinates BNM's response to operational disruptions.

In supporting the Board of Directors and Management Committee in discharging their duties, BNM adopts the 'three lines of defence' model (Diagram 3):

- Business units are the 'first line' of defence. They are responsible for evaluating the risk environment, establishing controls and ensuring that these controls are implemented effectively.
- The 'second line' function is carried out by the Risk Management Department. For reserves management, this function is carried out by the

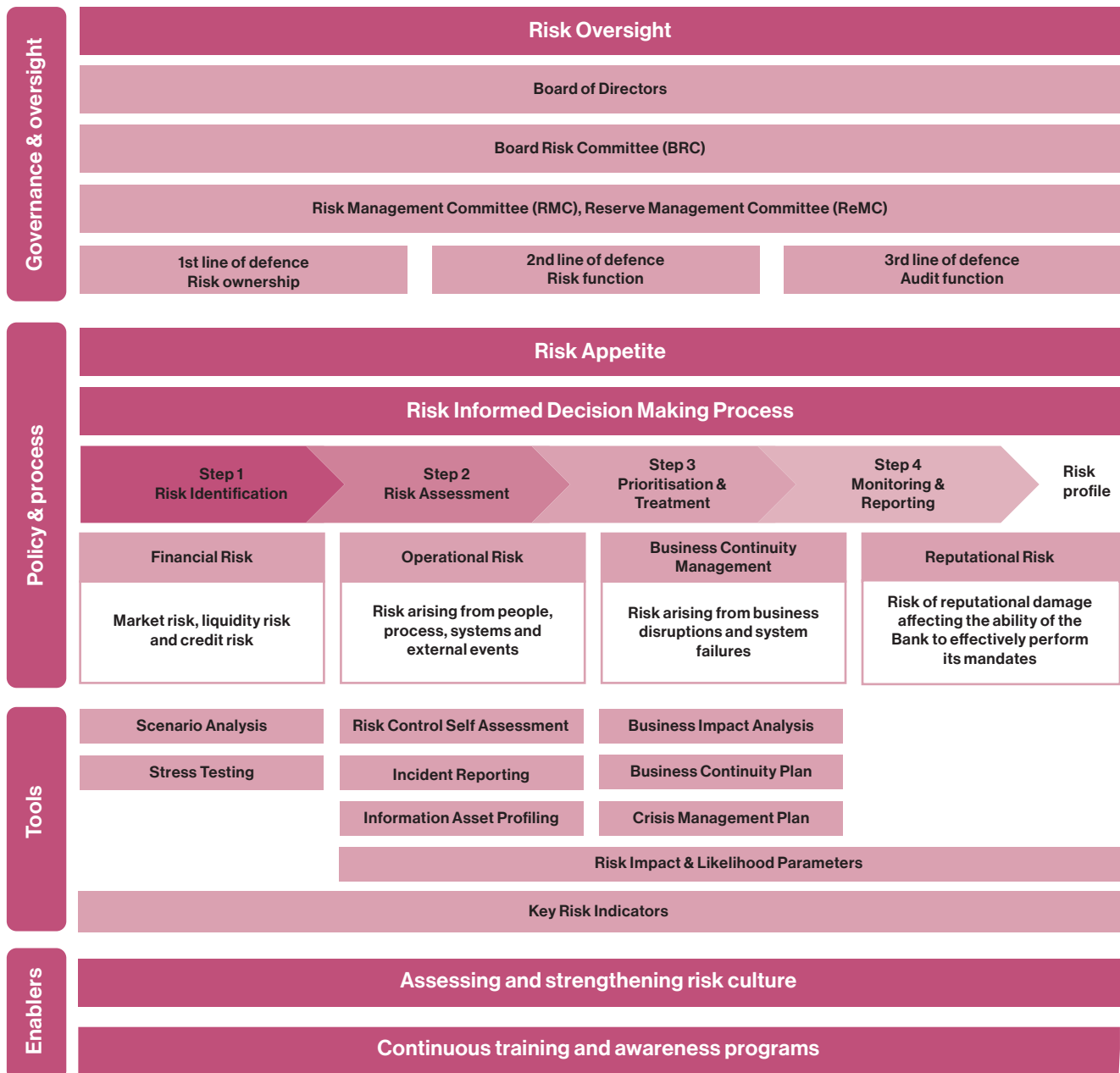
Risk Management and Internal Controls

Treasury Risk Management Section within the Investment Operations and Financial Market Department. They facilitate the adoption of sound risk management practices by business units through appropriate frameworks, policies and tools. The Risk Management Department also supports Senior

Management and the Board of Directors in monitoring risk developments and issues at an organisation level.

- The 'third line' of defence – the Internal Audit Department – provides independent assurance of the effectiveness of risk management policies and measures.

Diagram 1: Bank Negara Malaysia's Enterprise Risk Management Framework



Source: Bank Negara Malaysia

Diagram 2: Risk Management Governance Structure

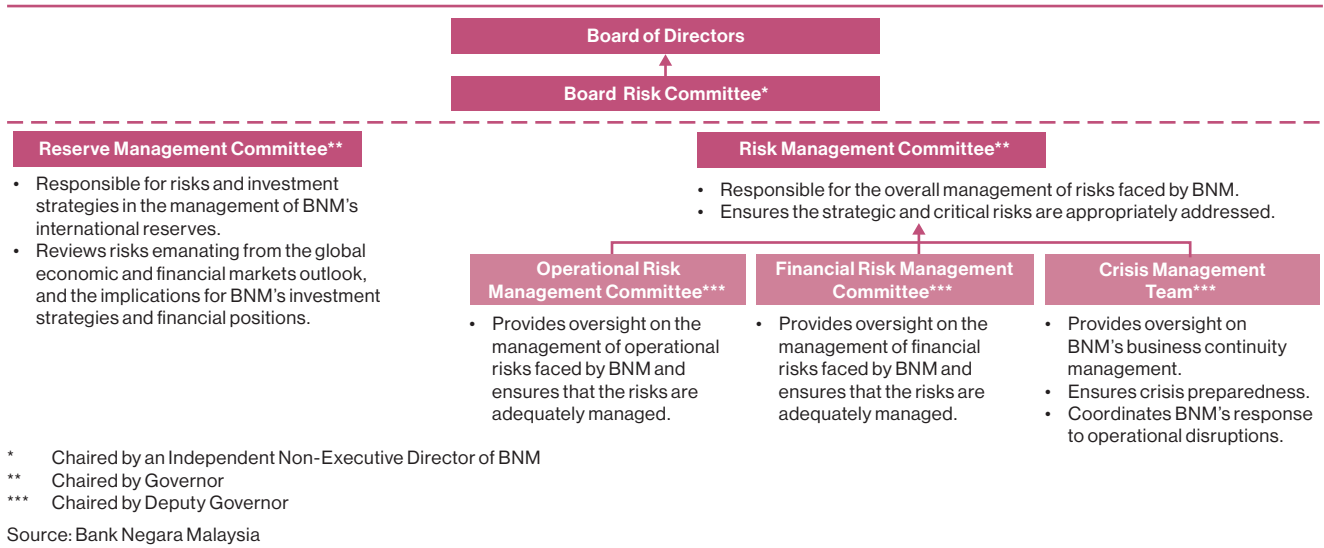
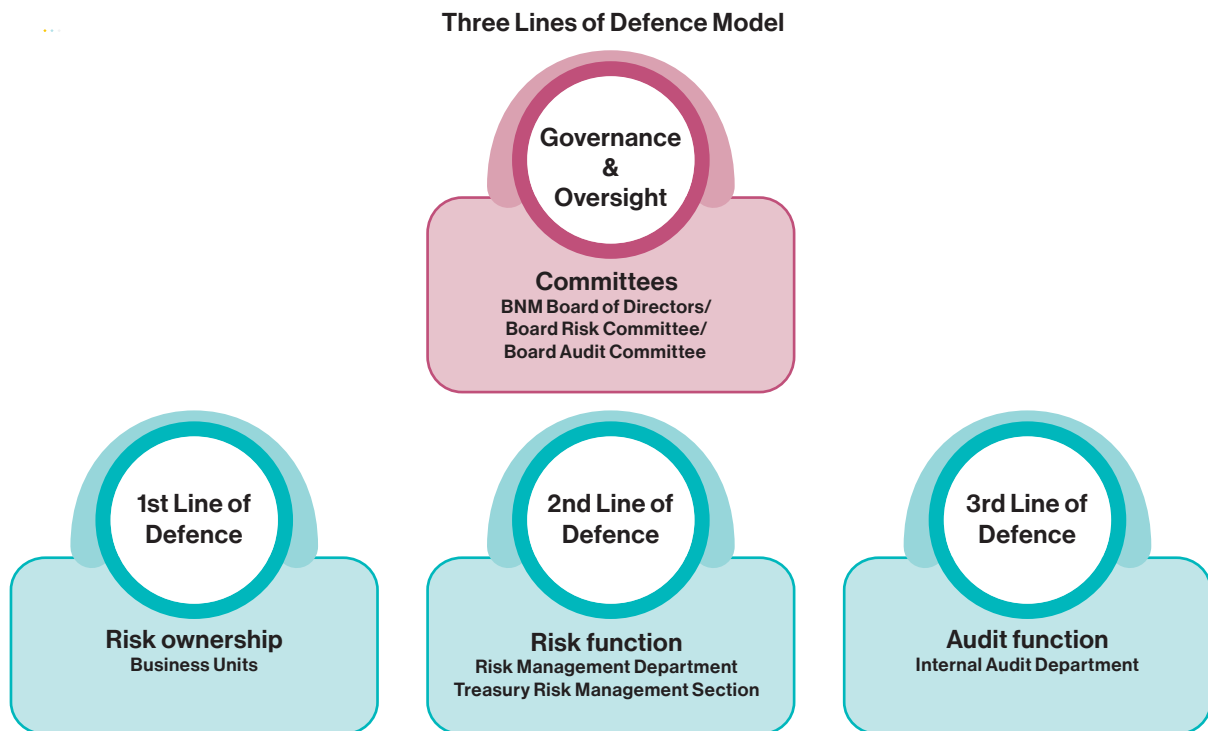


Diagram 3: Three Lines of Defence Model



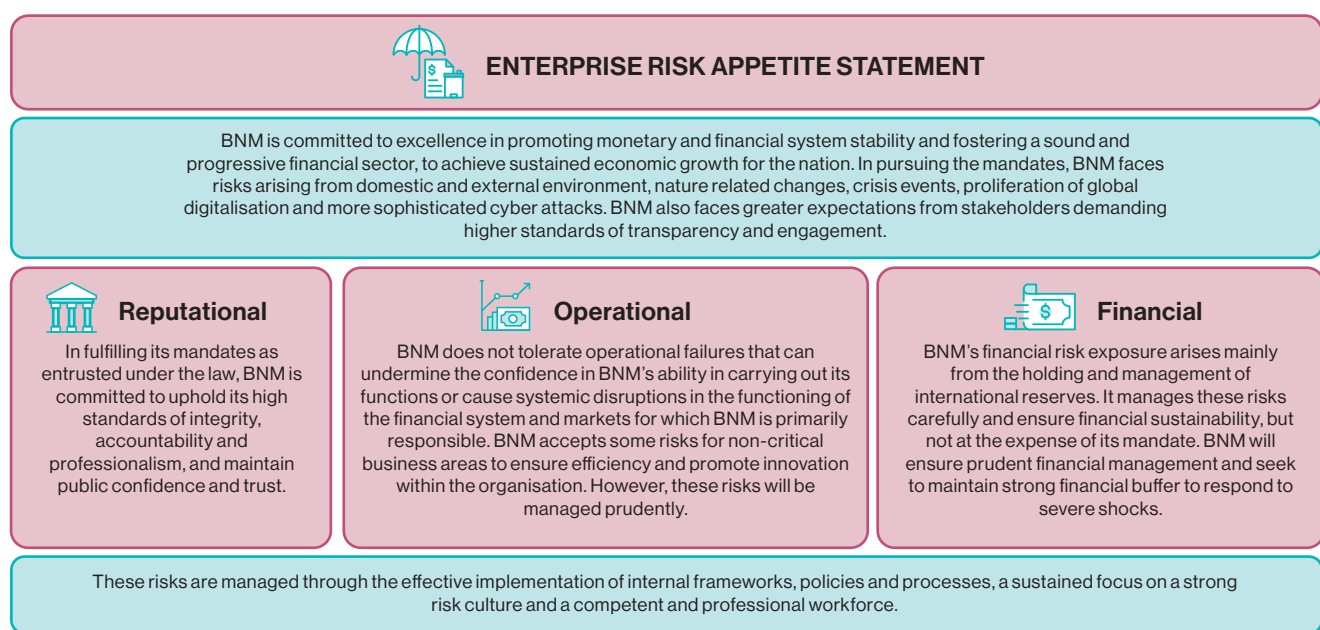
Source: Bank Negara Malaysia

Bank Negara Malaysia's Enterprise Risk Appetite Statements

BNM's risk management is guided by a set of enterprise risk appetite statements (Diagram 4), which specify the level and types of risk that BNM is willing to accept to achieve its business objectives.

The statements are subject to ongoing reviews to ensure that they remain relevant in light of the changing risk landscape. Continuous training, engagements and process enhancements are undertaken at various levels across the organisation's functions. These initiatives aim to integrate and align our operational processes and culture with BNM's risk appetite statements.

Diagram 4: Bank Negara Malaysia’s Risk Appetite Statements



Source: Bank Negara Malaysia

Proportionate consequence management actions in the event of breaches to the risk appetite also plays an important role in instilling a risk-aware culture. This promotes compliance and ensures accountability at all levels of the organisation.

To help business units assess compliance against the updated statements, we expanded existing key risk indicators to further improve our ability to identify and evaluate BNM’s risk exposures, including information and reputational risks.

Key Organisational Risks

Throughout 2023, BNM continued to adopt a comprehensive approach to risk management – covering policy, reputational, financial, operational risk, and business continuity management.

In managing policy risks, we are committed to sound policymaking practices, guided by our Policy Development Framework. The Framework establishes a well-defined governance structure and process for developing, reviewing and approving regulatory policies issued by BNM. Policy proposals are subjected to cross-functional deliberations within the organisation, as well as external consultations. Regulatory policies are approved by the Management Committee, the Financial Stability Committee or the Financial Development Committee,

while monetary policy decisions reside with the Monetary Policy Committee.

Our policy responses can expose us to reputational risk that directly affects policy outcomes or BNM’s credibility. In 2023, amid a highly challenging environment of higher costs of living, exchange rate volatility, and an increase in financial scams, we ramped up efforts to better communicate and explain our policy responses through targeted engagements. We developed content for public consumption in different formats and across more channels to improve engagement with the general public. This included infographics such as the ‘Monetary Policy Statement snapshots’ and ‘BNM Explains’. To improve financial scam awareness and empower individuals to better protect themselves, we shared scam awareness tips on the Amaran Scam Facebook.¹

On treasury related financial risks, BNM is exposed to market, credit and liquidity risks. These risks are closely monitored and managed against the investment benchmark and risk controls approved by the Board of Directors. In 2023, we updated the investment benchmark for international reserves, which defines the appetite for long-term risk and returns. This is

¹ More information on BNM’s public engagements and effort in combating financial scams throughout the year can be found in the ‘Engaging Malaysians’ chapter of this report.

reviewed every three to five years to reflect significant changes in the global investment landscape. We also implemented additional risk management tools – Pre-Emptive De-Risking Mechanism (PRISM) and Credit Value-at-Risk (CVAR). These tools were designed to limit market volatility during potential periods of prolonged market stress and include forward-looking assessments of potential losses from credit events. It enables a more precise quantification of credit risk, thereby keeping credit exposures within acceptable levels.

Risks from other non-treasury financial operations, including budgeting, procurement, and payments, are controlled through strictly enforced policies and procedures for procurements and payments to ensure transparency, accountability, and compliance with relevant regulations. We adhere to a robust budgeting and management accounting process that is underpinned by forward planning, forecasting and spend analysis. The budget is closely monitored by BNM's Board of Directors. On the procurement front, measures were taken to improve the efficiency of our procurement processes while preserving strong controls. In 2023, we established a Centralised Procurement Department. This aimed to strengthen BNM's capabilities in procurement management. We also completed a comprehensive review of our procurement management policies, which incorporated process improvements that leveraged on technology. These measures aim to deliver greater efficiencies, while continuing to ensure a high level of transparency and integrity in BNM's procurement operations.

In 2023, we remained focused on addressing BNM's exposure to technology and cyber risks, as well as risks from data breaches.

In an environment marked by heightened risks of cyber attacks, we implemented several initiatives and frameworks. This included the adoption of the Technology Risk Management Framework and Cyber Resilience Framework. We also improved our network resilience, technology architecture and implemented continuous cyber monitoring. The Cyber security Management Assessment Program (CMAP) was also accelerated to enhance our cyber security maturity. Additionally, we conducted mandatory training sessions on cyber security and information security management to help staff stay ahead of cyber and information security threats. We also reinforced our third-party security risk management. This is to ensure that the use of third-party service providers does not compromise the security of BNM's data, systems, or networks.

Business Continuity Management

Ensuring the continuity of critical business functions remains a top priority for BNM. In 2023, we continued to strengthen our operational resilience. We conduct regular crisis simulation exercises to test and improve our ability to respond and recover from disruptions. We continue to increase the frequency and coverage of these exercises to identify opportunities to further strengthen our crisis response and to familiarise staff with recovery and response procedures. Additionally, we continuously update our business impact analysis to capture emerging risk scenarios, such as floods and cyber attacks.

BNM's whole-of-bank approach in strengthening the organisation's resilience received international recognition, notably the Risk Manager Award from Central Banking Publications in March 2023.



The Risk Management Department and Cyber Security Department team, responsible for strengthening BNM's resilience in Information Security (from left: Ong Jit Seng, Tan Chai Heng, Noor Syafinaz Mohammad Zain, Wong Jing Yi, Beh Cheng Hoon, Laily Sahari).

Internal Audit

The Board Audit Committee (BAC) oversees the effectiveness of BNM's internal controls and financial reporting process. The BAC also provides oversight on BNM's adherence to legal and regulatory standards. In discharging its responsibilities, the BAC directs audit plans and activities carried out by the Internal Audit Department (IAD) to obtain assurance on matters overseen by the BAC.

The IAD provides independent and objective assurance on the adequacy and effectiveness of BNM's governance and risk controls. IAD also provides an independent assessment on BNM's international reserves management to the Minister of Finance. This ensures that international reserves are managed in accordance with approved policies and guidelines.

Audit priorities for 2023 were aligned with BNM's key organisational risks (including emerging risks) and strategic goals (Diagram 5). In formulating its priorities, the IAD incorporated insights gained from engagements with key stakeholders including business units, Risk Management Department, Senior Management and the Board Audit Committee.

One of the main priorities for IAD in 2023 was to provide assurance and value-adding control improvements on

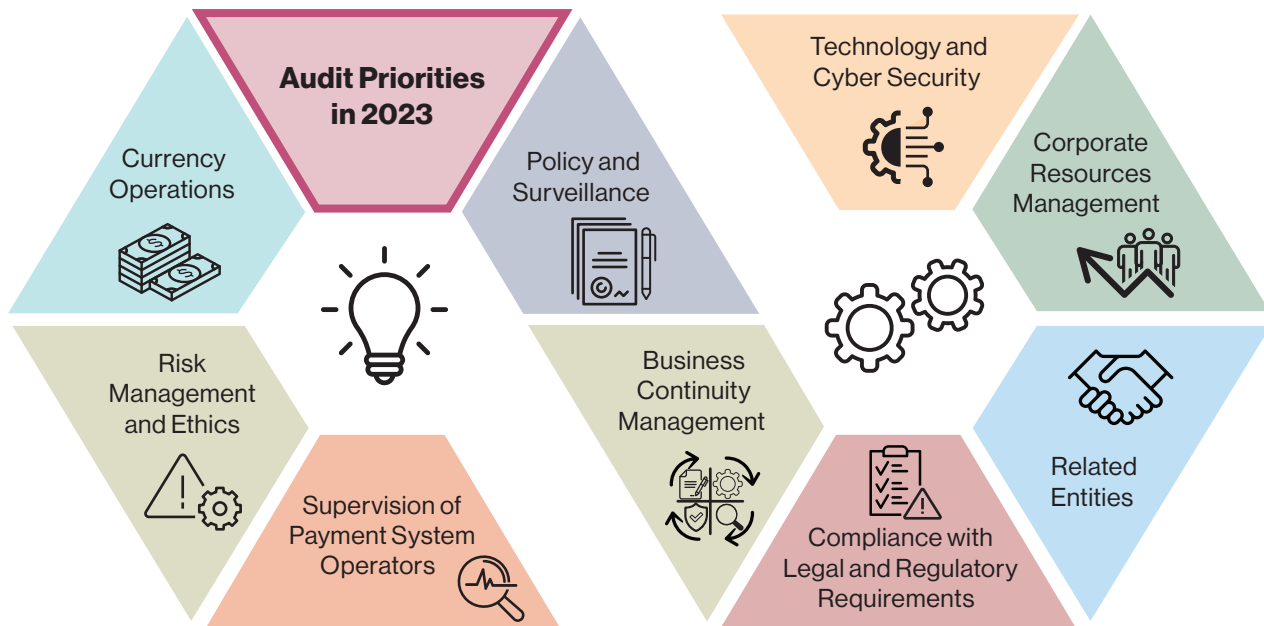
BNM's management of information security, cyber security, and technology risks. This is crucial to mitigate potential vulnerabilities in BNM's operations and enhance organisational resilience.

In providing holistic assurance to the Board of Directors and Management Committee, IAD continuously advocates for higher awareness on risk culture and sound control practices amongst staff. This is done through off-cycle engagements with business functions and regular dissemination of audit insights across the organisation to elevate risk visibility and awareness at all levels of the organisation.

The advancement of audit management software and data analytics employed by BNM has enabled a more efficient audit process and risk assessments. IAD also engages leading audit practitioners to drive continuous improvements in its digital initiatives and audit practices as part of ongoing efforts to harness forward-looking insights and provide value-added assurance on internal controls for the achievement of BNM's strategic objectives.

Moving forward, IAD will embark on adopting generative artificial intelligence tools as part of its continuous auditing approach. This will be complemented by the upskilling of staff in data science and analytics capabilities.

Diagram 5: Focus & Coverage of Audits Conducted in 2023



Source: Bank Negara Malaysia